Interplanetary Stories

WONDER Stories Quarterly

SPRING 1932

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Vol. 3 No. 3

WONDER Stories Quarterly

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WANTED: STILL MORE PLOTS

IN this issue of the QUARTERLY you will find the fifth and sixth stories resulting from the Interplanetary Plot Contest first announced in the Spring 1931 QUARTERLY.

The stories written as a result of the original contest have nearly all been published, and the enthusiasm expressed by our readers, indicate that they wish the Contest to be continued. As a consequence, in the last issue we announced that for the succeeding three issues we would award $10.00 for the best plot submitted up to the time of closing of each issue. We have pleasure therefore in awarding the second $10.00 prize under this new plan. If the results warrant it, we will continue to award the $10.00 prizes at the expiration of the year set for this contest; and will continue it as long as we receive good plots.

Speaking of plots, we want emphatically to warn our prospective contributors against submitting interplanetary war stories. A plot submitted that simply relates a war between two planets, with a lot of rays and bloodshed, will receive little consideration. What we want are original ideas, new points of view on interplanetary exploration; new ideas regarding the activities of Terrestrials on strange worlds, and of extra-Terrestrials on earth. We want our readers to study the interplanetary idea with a fresh viewpoint, forgetting all you have read in other stories.

The $10.00 prize for the best Interplanetary Plot received up to the publication of this issue, is awarded to Viding O. Jacobs, 3704 N. Odell Ave., Chicago, Ill.

WONDER STORIES QUARTERLY will pay $10.00 each issue for the best interplanetary plot submitted by our readers up to September 15, 1932. Professional authors are barred from this contest. The $10.00 prize will be paid upon publication of the story.

The man who sends in a plot:

1. That pictures people of other worlds as being just like Earthmen, and (as some authors put it) *speak English;*
2. That shows our hero going to another world to rescue a fair princess from an evil priest;
3. That shows our hero going to another world to single-handed overcome a great army; or
4. That shows our hero going to another world to conquer a horde of strange beasts;

This man should not hope his plot will receive serious consideration. If our readers study the plots that have been written into stories, they will perceive in each one some original "slant" on interplanetary travel, or of the conditions on other worlds. That original "slant" is what our readers should strive for.

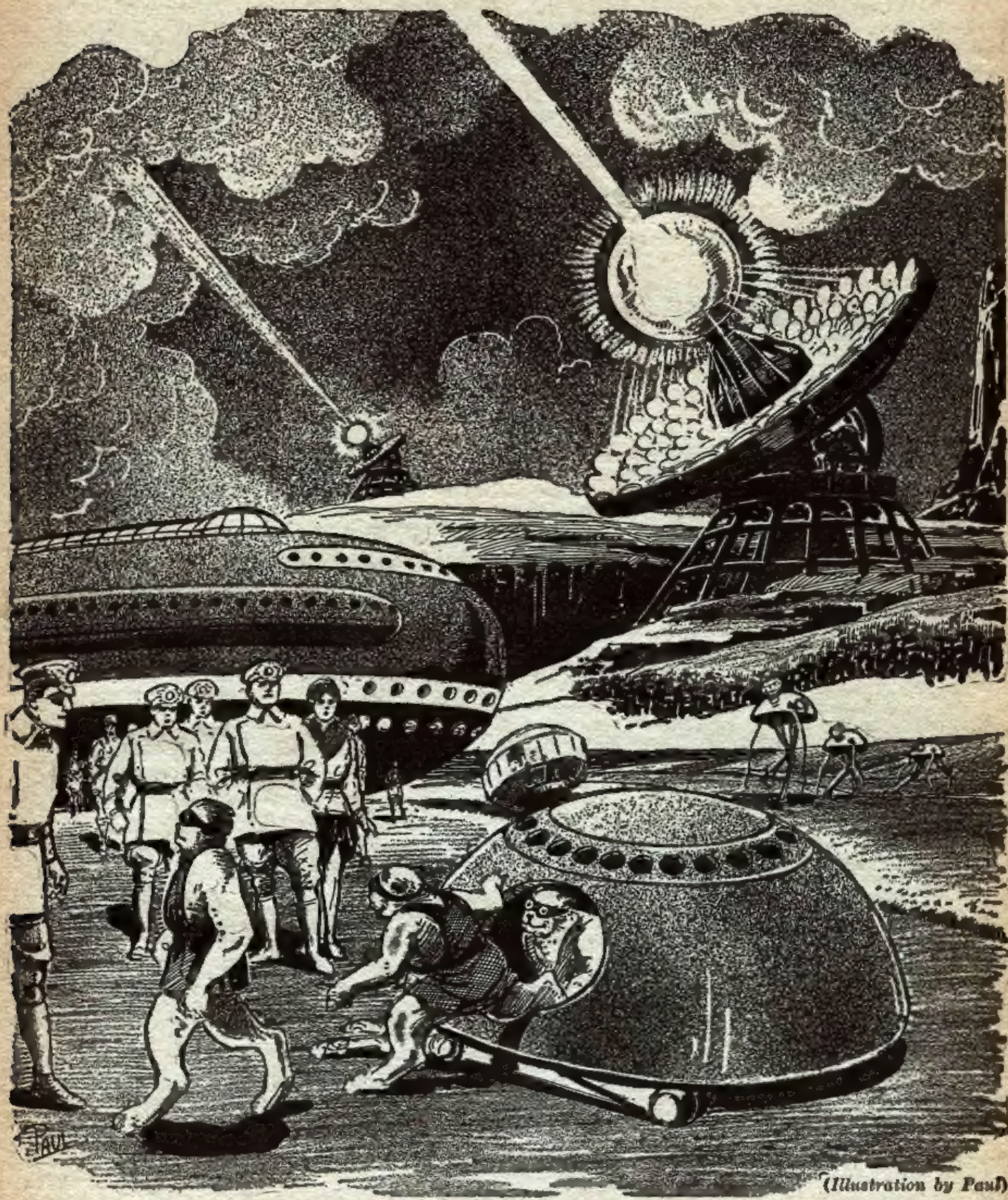
For other details regarding plots, we refer you to the Spring 1931 issue of WONDER STORIES QUARTERLY (Vol. 2 No. 3). Should you not have a copy of that issue, we shall be glad to send you printed matter outlining the details of the contest.

Above all, in order to receive consideration, your plots should be either typewritten or legibly and clearly written with a pen. Illegibly written manuscripts are practically always passed over without consideration. A good plot illegibly written may thus lose a prize.

The Next Issue of WONDER STORIES QUARTERLY Will Be on Sale June 15, 1932

VANGUARD TO NEPTUNE

By **J. M. Walsh**



(Illustration by Paul)

It was no intelligent form of life with which we were confronted. It was a mechanically propelled vehicle. The real inhabitants were now emerging.

THE NEPTUNE INVASION

By the Author of "Vandals of the Void," etc.

HOW small a thing it takes to turn the smooth-running current of a man's life from its accustomed channel! But for the veriest accident, a slipping of the geared wheels of fate, my great adventure might never have come to me at all.

The world looked very lovely to me that June night in the year 2235, as we of the Interplanetary liner *Sirius* prepared for the hour of our departure. I thought indeed that Earth had never seemed so fair. Contrast, though, must have accounted for much of that feeling. Our little planet was so different a world from humid, cloud-hung Venus, and it had none of the glittering unhuman and mechanical efficiency of sterile Mars, or the bare, bleak desolation of our own Moon.

I was young then, not quite thirty, and still navigating officer—third in actual rank—of the I.P. liner *Sirius*, still hoping for the promotion to which I felt entitled, but which somehow never seemed to come my way. The men above me held down their jobs for long on the normally smooth run between the Inner Planets; pleasant company—alluring Martian women and frail, pretty Venusian girls—was theirs almost for the asking, while quick hops and long leave in home ports combined with good pay to make the service attractive.

But that was not all. It was whispered by those who claimed to know that of late influence was securing the pick of the vacancies as they fell due, that we who had only our own abilities to back us were being crowded out—kept from promotion by those with friends to help them up the ladder. Others, like myself, were losing heart. Can you wonder then that I was beginning to feel a little soured? Had I been a few years younger I would seriously have considered getting out of the liner service, and joining up with the Interplanetary Guard. There, at least, merit counted more than influence. Even the slow old freighters, the tramp-ships of the planets, offered a better chance of advancement nowadays.

Well, I would make this round trip to Mars once more, and on the way there and back turn the situation over in my mind. Something might come of that, some opening appear, some little chance that might give me that hope of preferment I sought. I little knew in what fashion it was to come . . . .

Some time towards evening of that day—our departure was set for the midnight hour—Captain James sent for me. I went, expecting that it was some trivial matter of routine with which he wished to deal.

"Sit down, Grayne," he said, our greetings over. "I want a word or two with you."

My heart fluttered oddly at that. It was not his conventional opening, and I sensed in his tone no less than in his words, something more than I had at first anticipated. This bluff, red-faced man usually came straight to the point. But that evening he seemed not so anxious to put his ideas into plain words.

"Yes, sir," I said, seeing that he paused, "what is it?"

He glanced round the little cabin. Something in his expression made me think he was afraid of being overheard, though I knew there was little chance of that. The place was too well insulated. So much of the business done in the office of a space-liner captain is purely private that one cannot take the chance of eavesdroppers. So perhaps it was merely an instinct of caution that made him look that way. Nevertheless I felt troubled, and suddenly keyed to the alert.

He began. "You're having a new assistant this trip, Grayne," he said. "The shore-end has just advised me."

I nodded. I had been hoping for long that something of the sort would be done, for my duties were getting more onerous than I liked.

"Just a moment," Captain James saw I was about to speak and cut in ahead of me. "This is between ourselves—strictly. Forget our respective ranks for the moment. I like you, Grayne. I have a feeling that you like me.

J. M. WALSH

ONE of the greatest services that an author of science fiction can perform writing interplanetary adventures is to show the infinite differences that might exist between various forms of intelligent life.

If we were to think of an exploration from another world landing on earth, we would seriously expect it to consist of human beings, but of a form of life with whom we may have not the slightest possibility of understanding. There is likely to be therefore terrible days of uncertainty and suspicion on both sides before the motives of the explorers and earthlings are made clear. Certainly the earth might be inclined to kill off the invaders at once, rather than take the chance that the purposes of the exploration might be dangerous to us.

If we, on the other hand, were to explore other worlds, we might naturally expect the natives to view us with the same suspicion and distrust; and should not be surprised at an open show of hostility.

The great merit of this story of Mr. Walsh, a worthy successor to "Vandals of the Void," is that aside from being a most thrilling and breath-taking adventure, it shows our earthmen in two rôles, as the explorers, and let us say, as the explored upon the great planet Neptune.

At least we have got on well together. That being so, I can wish you nothing that is not good. I'm coming to the point now. The man who's being sent us is not the type you or I would have picked ourselves. He's a college-bred pup—the kind that can lay over us in theory—and a friend, or something of the sort—I don't know the exact relationship—of one of our directors. You see now what that means."

"I'm to teach him the job," I said bluntly. "He's to get the practical experience under my tuition, and when he's got it, well, he can step into my shoes and I can go where I please."

If I spoke a trifle bitterly it was because of the thoughts in me, the feeling of hopes thwarted that could never come to fruition save by some lucky accident.

"Not quite as bad as that, I hope," Captain James said kindly. "But I thought I should warn you. The pup can pull strings that we can't and if we rile him . . ." He made an odd grimace. "I've no wish to be disrated any more than you have. It would be a sad come-down at my time of life to have to leave the I.P. liners and turn to the Moon freighters for a living. Bad for both of us."

IT would. I knew that, as I knew the Moon freighters themselves. I had graduated there, made my statutory six round voyages, as most of us had to do. A hard, rough school, but splendid for discipline. They taught a man to take care of himself—and his ship—and to keep at work with one eye on his job and the other and both ears wide to catch possibilities of trouble. For the rolgar miners, going to or coming from the Moon, were a tough crowd, hard-bitten men, not a few of them criminals. With such there was always the chance of something breaking out. More than one Moon ship, seized by them, had turned pirate and harried the lanes of commerce until the formation of the Interplanetary Guard had eventually stamped the practice out.

Even to-day they drove their men hard in the Moon service. The freighters themselves, ugly, blunt-nosed tramps of space, were no featherbeds. To go back to them now, broken and disappointed as many a disrated skipper had done, would be worse than disastrous. A great forcing ground for the youngsters who wanted space-training, they could well be Hades for the man who had known better days and high command.

"So," Captain James concluded, "you see why I've asked you to watch your step and all the rest of it. It's rough, Grayne—I'll grant that—on both of us, but we'll just have to grin and bear it. It mightn't be for long, after all. Something's bound to happen one of these days and then this business of promotion by influence is going to get its death-blow. The sooner the better for us all."

"Some over-confident, fresh youngster will cast away a ship," I told him, "and then you'll have the passenger trade falling off and the underwriters pushing up insurance rates until the directors learn sense. But after all, the supply of friends and relatives must run out sooner or later," I added hopefully.

Captain James grinned. "There's one born every minute," he returned. "That's all, Grayne. Don't make any trouble now that's going to have its repercussions on shore."

I promised I would not.

Coming up to my own quarters later I paused for a moment on the cat-walk that led across to the observation tower to look down at the arriving passengers. Fifty feet below me the head of the gangway rearing from the landing stage spilled them out on our deck. There were not many. On the evidence we were going to have a small ship. It was getting rather late in the season for mere tourists, and most of the homeward-bound planetarians had left by other and earlier liners. So it was mostly men on business who predominated, only an odd woman showed here and there.

Last of that tide came a man and a girl. It was the man who caught my eye first. He was young, slim, quite a boy, and dressed in the uniform of the line. I was too far from him to see the insignia on the collar of his jacket, but since he was a stranger to me I surmised he was my new assistant. The girl with him was equally a stranger, but from the way she kept beside him and the glances that passed between them I could see they were on friendly terms.

The boy—it struck me then that I had not been told his name—should have been on board long before this, but the girl, no doubt, was his excuse for the delay. Not the sort of excuse I would have accepted . . . normally. In this case, however, if I was to follow James's instructions I should have to overlook it.

I would have given a good deal then, though, for the chance to blow him up.

I watched them in the glare of the huge light tubes that turned night on the landing stage into day, saw them halted a moment by the emigration and customs men while their papers were examined, then they reached the deck and passed from my ken.

It was quite half an hour later before the fellow reported. I was casting up my calculations for the first leg of that night's run when he knocked at the door, and I merely called, "Come in," without looking up or taking my attention off my work. Purely for the sake of discipline I kept him waiting quite ten minutes. I would have made it longer had I been able to find any legitimate excuse.

"Well?" I looked up and waited for him to explain his presence.

He did so in a few words, sharp and concise in a fashion that set my opinion of him forward a few notches. Though he might waste time he had already learnt not to waste words. Hasken, he told me, his name was.

"You're late," I said. "You should have been on board hours ago."

"I wasn't told any time to report," he answered. "I thought as long as I came with the passengers—"

"Well, you thought wrong," I pointed out. For the life of me I could not help saying that. "However, there's still time to get down to work. Check those calculations, will you?"

I PUSHED him over the carbon duplicate sheets, and he took them without a word. He went through them quicker than I expected, and at the end:

"They're correct," he said. "At least I make them so. But they tell me you chaps seldom make mistakes."

I stared at him. I would have thought it clumsy flattery, meant to get on the right side of me from the start, but for his air of utter nonchalance. He might have been speaking about the weather for all the sign he showed.

"We do make mistakes." I took him up a trifle sharply. "That's why we check. We're not machines."

He faced me gravely. "I see. I guess I've a lot to learn."

Promising, certainly. Here was my chance then to start my questionnaire.

"Let me see, Hasken. I don't know much about you. I haven't had any report, other than that you were coming. Been seconded from anywhere?"

"I've no papers, if that's what you mean." He went on to tell me a little about himself. He had been college-trained, well grounded in theory—that was self-evident—

and he had made odd trips to Mars and Venus, and once a tour of the asteroidal colonies. He was not new to space then, in one sense, yet he had to admit that he had never taken control outside the atmosphere. Yet when I put him through his paces he seemed to know what to do, could even tell me a thing or two. I left it at that. Perhaps before we reached the other side I might manage to mould him to my wishes.

"I think we'll get along all right together," I said as casually as I could.

"I hope we will," he said calmly. At the moment I think I almost liked the boy, despite the prejudices I had formed against him in advance.

Abruptly a tube glowed redly on the bank before me, the warning signal that we were now entering on our final preparations for departure. From our eyrie in the quartzite dome of the observation tower, set like a hump on the top of the *Sirius*, we could see all around us and below save where the bulge of the ship's hull hid the ground from our sight. The landing stage was a glare of lights now. The bulk of the *Sirius* was bathed in them. The blue-black of the night sky showed dark by contrast. Far away to the East the myriad lights of New York cut a glowing cube from the darkness of the night.

"All visitors ashore. We leave in five minutes." The brazen blare of the stentors* sounded through every corner of the ship. "Passengers are instructed to seek their cabins, and lie down. Acceleration will reach its peak within twenty minutes of starting time. No passengers are allowed on deck at time of departure."

The brazen voices went on, repeating the instructions, endlessly it seemed, first in English, then in Tlananian and Venusian for the benefit of our Martian and Venusian passengers. Of a sudden the sound died. A hushed silence fell for a moment on the ship, then startlingly came a lone brazen voice, audible all over the *Sirius*.

"We are casting off now."

From the observation tower we could see the great clamps that held the *Sirius* in place sliding away from the hull like huge hands of metal. The platform on which the liner itself rested tilted gradually until our nose was pointed at the zenith, then we were swung gently round until we were directed at the exact section of the firmament whither our course was set.

Soft bells rang; shutters dropped, and lights glowed one after another on the directional bank in front of us. I made the necessary adjustments of the instruments for the first leg of our course, then gave "All Clear" to the control-room.

Red warning lights glowed all over that portion of the *Sirius* visible beneath us, a siren shrilled, then came the devastating thunder of our rear rocket tubes. A sensation of intolerable weight afflicted us while a man could count ten, then the anti-mechanism** in the tower took up the strain and we were free to breathe again.

The Earth seemed to have dropped from under us like a weighted ball plunging down into the depths of space.

*Stentors: a combination of megaphone and phonograph by which instructions for the conduct of passengers are made audible throughout the ship. Their use on I. P. liners has recently been made compulsory.

**Anti-mechanism: a system of magnetised plates installed in the working quarters of the I. P. ships with the express idea of nullifying as far as possible the worst effects of the initial acceleration. Its use is confined almost exclusively to the control-room, engine-room and observation tower. Excessive cost, difficulty of installation and impracticability of working on a large scale prevent its application to the whole ship. By insuring that the passengers keep to their cabins and remain lying down until the ship has passed beyond the planet's gravity pull, the worst effects of the acceleration are obviated.

CHAPTER II

A Person of Consequence

ONCE we were well out of the atmosphere, and were holding our speed normal at the acceleration peak we had reached I decided to send young Hasken off to bed. There was nothing further he could do for me now; our calculations had all been made, checked and counter-checked and the rest was mere routine work.

I had noticed for some time that he had been looking tired and heavy-eyed and I guessed the reason. He had probably spent the day in a round of farewells, maybe winding up at the end with a supper-party. I couldn't altogether blame him. I would have done the same had I been in his shoes. But after a trip or two he would learn wisdom and, like myself, put in the sailing day by resting, accumulating reserve strength for the strain of the take-off.

The first Guards' station, twenty-four hours out ahead of us, reported "All Clear" along the traffic lanes, and promised to send us in further reports at intervals. At least, that was the message that came down to me from Poltan in the signals room, a tiny rabbit-hutch of an erection perched forward from the observation tower. I marked off my log and was beginning to yawn when Brent came in.

He was first officer with us that trip, an older and more grizzled man than I, and like myself not as contented with his lot as he might have been.

I swiveled round in my chair as he opened the door and when I saw who it was, "Come in," I said.

He came in and seated himself on the edge of the table.

"All serene, Grayne?" he asked.

"More or less," I answered. "I've just got the Guards' call through from Poltan. They report a clear lane ahead of us for the next twenty-four hours. They always do, though."

He grinned. "Bravo, Guards. I don't know what we'd do without them, though. It's a fine service and fine men. I can't say, however, that I always like their autocratic ways. Still, seeing that according to their code they're responsible for the smooth running of traffic and the maintenance of law and order in the void, I suppose they've got to be. I for one wouldn't care to go back to the old days when we had no Guard-ships to protect us and interplanetary piracy was the order of the day."

"All that is changed now," I said, and he nodded.

"All that is changed," he echoed, "and I'm growing old without ever having realised my life's ambition."

He paused, but I did not ask him what that was. If he cared to tell me, well and good. If not, it was none of my business.

"I'll be fifty-five the day we reach Mars this trip," he ran on presently. "Thirty-five years in the liner service and only first officer now. I don't think I'd be that if Baines, our first on the voyage before you joined up, hadn't got on the scoot at Shangun in Venus, and ended by being knifed somewhere down in the slums. There were no prime favorites about to be pushed into the position, so James took it on himself to put me up a step. When we got back to Earth and the company got his report they couldn't very well disrate me."

He flung me a sidelong glance. So close were our thoughts paralleling each other's that I could guess what was passing in his mind.

"I'm taking this voyage to think it over," I confessed. "Like you, I'm feeling dissatisfied, though with rather less cause, since I'm younger."

He smiled a little mirthlessly. "Take my advice and

get out while you can, before you find you're tied to the wheel," he returned.

"Get out to what?" I asked. "I'm not tied to the wheel as yet, but I am tied to the void."

"So I should imagine. Space gets into one's blood, doesn't it? But I should have thought there were opportunities for a man of your age—or want of it. They're talking of opening up the Outer Planets now. Time they did. There's more than one expedition projected. I've heard—I don't know how true it is, for these things seem shrouded in secrecy—that there's a space-ship likely to start for Planet 8 any day now."

"Neptune," I said, calling it by its old style. "I wouldn't mind going there, not that I suppose there'd be much to see. But there's the novelty of being one of the first to set foot on a perfectly unexplored world."

"Well, when you get back, if you still think that way, try for one of later expeditions. Besides Neptune, there are still Planets 9 to 12 to be explored yet. By the way, I heard you've got a new man in with you."

"Yes," I said warily. One never knows these days who is one's friend and who isn't. Brent might be quite alright—I felt almost sure he was—nevertheless I had no intention, until he had committed himself, of saying anything that could be reported against me.

"How's he shaping?"

"Like most new men. He should be O.K. by the end of the trip. Know anything about him?"

"ONLY what the old man's told me," said Brent. "He has an uncle, who has a big wad of shares in the Inner-Planets Company. That's why he's been pushed in here—influence—and if you're not careful you'll be pushed out for him once you've stood him on his feet. I'm saying that to you, because I know you'll keep it under your hat. I'm not like the Old Man, afraid to commit myself. It's true every little whisper has a disconcerting habit of getting back to headquarters, but then I flatter myself I know my friends well enough to see when I can trust them, and when not. I'll be going now, though I'll look back in an hour or so and take over after rounds, if you'd care to stretch out."

"Thanks," I said. "I wouldn't mind. The boat can run herself more or less at present. We're running locked on a dead-line course. After breakfast, though, we'll cut out the watches properly, and in a while or so I should have Hasken so he can take over navigation when I'm off duty. Meanwhile I'll think over what you said about the Outer Planets. If that Neptunian expedition has any room in it, I'd jump at the chance of joining on our return."

"You won't get the opportunity," Brent said from the door. "The personnel's already selected for that, I hear. I wouldn't be surprised if they jumped off sooner than anyone expects. Good night."

With that, abruptly, he was gone.

I came back to my night-watch. Actually here in the void there was neither day nor night, darkness nor light, but for convenience's sake we divide up the twenty-four hours as though we are on solid Earth. A pleasant little fiction that keeps the passengers in good humor, and that from our point of view makes for easier running in arranging our working hours. So that's that.

Seeing the controls were locked safely with a man in charge, and that everything else was in order I scampered along the spider-ladder to Poltan's quarters. The transmission room was a maze of shaded light bulbs of all colors, and in between the shields the shadows lay thick. Poltan and his assistant, with the green eyeshades pulled well down from their foreheads, looked round as I entered. Poltan growled something I did not catch, resentment at the intrusion, I guessed.

"Oh's it you, Grayne," he said half-apologetically the next instant. "Shut the dam' door and come in. I don't want that tank-light from outside filtering in and disarranging my signals."

"Sorry," I said. "I wouldn't have come if I'd thought you were busy."

"Busy be hanged. It's only routine work. Small ship this time, but the passengers seem to be sending a double lot of messages home. They've all got over the effects of the acceleration now and want to tell the planets how wonderfully well they fared. It's enough to make a man a cynic the bilge we have to beam through here sometimes. The running depends on signals' efficiency, yet the outsider seems to think we simply exist to push off 'Darling Daddy, love from Pussy,' sort of messages."

"At least it keeps you thin," I smiled.

"It does. It . . ." But a tube flared up with a crackle of red light, and Poltan broke off in the middle of what he had to say.

A touch of a push button sent the shields shrouding all the light tubes save the one that was crackling to life, and the little mirror opposite, that caught and reflected the light impulses on to the sensitive photographic film where they were recorded for future reference, winked and flashed, and died, and winked and flashed again.

"Hello, something's coming," said Poltan, almost under his breath. "Station message. Here it is. They've got our answering flash. 'Message begins.'" Pencil in hand, reading from the flashes as the mirror caught them, he jotted down on the pad in front of him the signals as they came over.

"It's for you," he said as the mirror darkened, and remained so. "'General message for all navigational officers on Martian Lane 66.' You're one of that bunch. 'Liner *Syrtis Major* reports meteoric swarm hitherto uncharted. Bulk of swarm appears to be nebulous dust. Too far away to permit minute examination. Plotted trajectory of course, however, suggests possibility of orbit crossing space lane at—'" Here followed a host of figures intelligible only to a navigational officer or one intimate with the intricacies of a space-chart.

"Got those figures?" said Poltan at the end. "Because if you haven't I can let you have the print inside five minutes."

"I've got them," I told him, "but I'd like the print as soon as I can for checking purposes."

"Well, wait here till you get it." He pulled a lever and the section of the film concerned, snipped off by a guillotine, went dropping down to the development room below the observation tower, whence in five minutes to the tick the still-damp print was shot back to us by pneumatic tube.

"I'll take this in and plot the trajectory now," I said. "Just as well to get it over, though from *Syrtis Major's* calculations it should miss us by some hours."

Poltan gave me his cheerful grin. "Those calculations are bound to be correct," he said. "They've been vetted by the station that passed them on, too. But don't rely too much on that. I wouldn't if I were you. There's always the chance that some fool tramp-skipper may give the swarm a blast of his tubes to help it on its way and so throw the trajectory calculation right out of gear."

"I'll bear that in mind," I said. The tramp freighters, gypsies of the void, are a tough crowd to deal with. The doctrine of personal responsibility, ingrained code that it is with every regular line-skipper, seems to have no meaning for their masters. Their old tubs of space-ships wander wherever they please, making from one planet port to another on the off-chance of valuable freight, and not so seldom either doing a bit of smuggling on the sly. Nevertheless whatever their reputation for irresponsibility,

I didn't fancy that the suggestion mooted by Poltan needed serious attention.

BACK in my own quarters I worked out a trajectory from the figures supplied, and found the result agreed with the general message. So much was satisfactory. Then on the huge space chart that covered one wall of the observation room I marked off the swarm's passage. It would curve across our course at a point of intersection a quarter of a day ahead of us. No need to worry then.

When Baines came in to relieve me I turned my figures over to him, told him one or two things I thought he should know, and left.

It was too early for the ship's company to be astir yet; not for two hours or more would the buzzers rouse the passengers. Nevertheless as I came down to the level below in one of the corridors I caught sight of a slim trim figure coming towards me. I must have been in the shadows, for the girl—for such she was—almost ran into me, then drew back with a stifled exclamation. Though I could not be sure I had an idea that she was the identical girl I had seen come aboard in Hasken's company.

"What are you doing here?" I said, almost roughly. "Don't you know passengers aren't allowed on this level?"

"Aren't they? I didn't know that. I . . . I think I must have lost my way."

I gave her a quick glance. An Earth girl, slimly built, almost boyish in figure; dark eyes that perhaps could look at one widely innocent, though now they seemed tired and heavy-lidded; lips that drooped pettishly. A girl one felt who had found things come so easily that she was almost, if not quite, spoilt.

"C deck's two levels down," I informed her.

She looked up and met my eyes with what I felt was an odd touch of chilly contempt.

"Down there!" she said. "Oh, I'm not quartered there. I've a stateroom on B."

A person of consequence!

"Doesn't matter who you are," I said steadily. "You've no business here. I'll see you back to your own level. Come along."

She offered no objection to this, did not offer and I did not ask any further explanation of how she came to be wandering about the control levels. I was sure that it could not be merely that she had lost her way. The illuminated signs were plain enough; only a blind person or one who could not read could be excused for passing without noticing them.

"Do you know," she said as we moved along the corridor, "that—if I wished—I could have you broken for this? For insolence?"

I looked sharply at her. There was no rancour in her voice, no indignation, real or assumed, in her face. It was not a threat she had made, merely a plain statement of fact. That was all.

"Could you?" I said encouragingly. "When we get back to Earth, that is, of course."

She nodded. "You don't seem to want to know why," she said.

"I can guess. Influence, I suppose."

"My name," she said, gloatingly, I thought. "I'd better tell you that. I'm Paula Fontaine. My father—his name may be not unfamiliar to you—happens to be president of this company."

"Is that so?' Well, here you are at B level. I fancy you can find your own stateroom now. And—I tell you this because you are no more than a child—remember this, that at present you are no more than one passenger amongst many and no exception to the regulations can be made in your favor. What the shore-end may say when the voyage is completed, I don't know. None the less quite a lot can happen between now and then."

She turned and looked at me contemplatively, with an intense chilling stare that should have frozen me, though it did not.

"Is that a hint, or a threat, or something of the sort?" she queried evenly.

"No. Merely a reminder that the officers are running this ship, not the passengers."

"Thank you. That's all I wanted to know."

With that she left me abruptly, as though I and everything connected with me had ceased to matter as far as she was concerned.

She tripped lightly down the shadowed corridor, turned and passed from my sight.

The minx!

CHAPTER III

The Unforeseen Occurs

I MENTIONED the matter of the girl to Captain James when next I had word with him. I did not go out of my way particularly to seek him. The matter, from my point of view, was not one of any pressing urgency, and in the circumstances I was not anxious to make a mountain out of a mole-hill.

He laughed when I told him, softly, not mirthfully enough to satisfy me.

"You did right, of course, Grayne," he said. "Quite right. But"—he looked at me meaningly—"I'm better pleased it was you than I. If the lady should decide to complain to that father of hers . . ." He finished with a gesture singularly expressive.

"That's nice of you to hint that," I said, a trifle bitterly. "But it's coming to something if the passengers are to be allowed to run the liner and go wherever they please whenever they wish. I'd like to know what attitude I am to adopt in the future. Am I to tell everyone I meet that they're on forbidden ground, or am I simply to carry on as though I didn't see them?"

He paused a moment—I wonder what he would have said or done had he known how fateful his decision was to be?

"I think we should make an exception in favor of Miss Fontaine," he said thoughtfully. "After all, it's the custom of the trade, you know."

There was nothing to be said to that, so I left it, merely remarking, "So long as she does not want to take up her quarters in the observation room, I can't see how the matter affects me."

I thought at first he was going to say something more about it, he stared so long and quizzically at me, but when he spoke it was on another matter.

"How's that lad, Hasken, shaping?" he asked.

"Quite good," I had to admit. "Better than I expected. And he shows no sign of wishing to presume on his relatives' influence. Queer, though, Captain, that we should have two on the one voyage, each with a big pull at headquarters."

"Not so much queer as a coincidence," said Captain James dryly, so dryly that I wondered if he knew anything that I had not yet been told. I fancied he did. What it was I could not surmise. I might have queried him on the matter had he not changed the subject with a celerity I was inclined to regard as rather suspicious. It was that more than anything which made me imagine the subject he was now broaching could be of little moment, merely an excuse to steer me away from something about which I might get far too curious.

"I've been talking to the chief artificer, just before you

came in," he said. "He was nearly fusing. Wants me to rap somebody hard over the knuckles at the shore-end on our return. Seems he's been testing his spares and finds they've worked a lot of defective wiring off on him."

"Somebody getting a rake-off out of it, I'll be bound," I remarked. "Well, now he's found trouble, he'll be careful and test everything before he makes repairs."

"That's what I told him," James said. "Anyway it's only in the spares. The ship itself has been new-wired and is bound to be all right. You've struck no trouble?"

"None. Still any defect wouldn't manifest itself except under test for full load, and we're not likely to carry that under normal conditions."

"So I thought. Well, now about that swarm of meteorites and *Syrtis Major's* report on them . . . "

We went on to talk of technicalities . . . .

* * *

The routine-laden hours drifted slowly by on leaden wings. According to all calculations the orbit of the meteoric swarm should intersect our route at midnight that night, though actually the *Sirius* would not reach the spot until three hours later.* At our present speed they would be well away from us, and unless the swarm was particularly large it was doubtful if we would even see it. However, just to be on the safe side I decided to rearrange the watches, take over myself about eleven, and remain on duty until I was satisfied we had safely passed the point of intersection.

I don't know what it was that sent me up to the observation room an hour or so sooner than was necessary. A queer restlessness that I could not define, I suppose. Certainly it was no premonition of evil.

I pushed open the door, then stopped dead on the threshold. Hasken was not the only occupant of the room. One of the officers I could have understood. There would have been reason for his presence. But this . . . .

It was the girl, Paula Fontaine!

SHE jumped quickly to her feet as I entered. I fancy she realized she was doing wrong in being there at all, for her face went scarlet. Hasken swung around—I think he had been talking to her, though I had not heard voices; at any rate he had not been attending to his work—and his eyes traveled slowly from the girl's face to mine. No one said anything for the moment. Only a tense silence hung in the air, drooped between us like a curtain.

"Well," I said at length. It was the only thing I could find to say short of storming at the pair, and this, for more reasons than one, I had no intention of doing. I thought I could sum up the situation neatly enough without any explanation being given me. This boy holding a responsible post, in charge of intricate and intriguing machinery; this girl, attractive in her own way no doubt, susceptible to admiration, capable of giving it, too, for that matter. Human, both of them, the boy haloed, if anything, by the prestige of his position. No more than that, I felt sure.

"I . . . I did not expect you for . . . so soon," Hasken said in an unsteady voice. The girl still said nothing, remained a mute spectator, one hand whitely clutching the chair back, the other clenched against her breast, the color fled now from her cheeks, in her eyes a vague querulousness, as though she was doubtful what would be the outcome of it all.

I could have smiled at the boy's answer, were it not that the situation from one point of view was too serious for anything of the sort. At least I could credit him with having told the exact truth. He had not attempted to wriggle out of the difficulty by any subtle evasion that might postpone the reckoning.

"You should have known better." I came in, and the door slid closed behind me. "You have the lives of a ship's company in your care. A little carelessness . . . . " I did not finish. I was not angry, for it was not a situation where anger would be of any avail. Keeping my head, gentling the pair, I might gain far more than I had ever hoped to any other way, bring them to a sense of the enormity of this transgression of discipline.

"I know. I'm sorry. I realize it now." Hasken's voice was toneless. I think he really meant what he said. He had not realized it before. The girl perhaps had swept him off his feet. She at least should have known better. Seemingly she did not.

I turned to her. A touch of defiance had come into her face now. What I said to her might not matter, but she was plainly prepared to resent any suggestion that the blame was wholly Hasken's. She must take her due share of it. She would, if I had any say in it.

But what I had trembling on the tip of my tongue was never uttered. As I turned I saw the flicker of a red light dance out from one of the darkened bulbs ranged above the bank of the control-keys, dance out and fade again. A weak flare, such as comes from a weakening current.

The girl followed my eyes, must have seen my face set hard.

"It's the second time it's done that," she said, speaking for the first time. "Just before you came in it flickered like that."

Gods, of all the fools! If only they had told me.

I crossed the room in two strides, pushed Hasken out of his seat, and the girl moved out of my way so that she was against the wall between me and the door. Feverishly I touched one lever after another, control-room, engine-room and general quarters. Bells rang furiously all over the ship.

The white surface of the television screen lit up abruptly, showing me a view of space outside the ship. I caught a glimpse of whirling black bodies, a trail of them, bearing down on us, and in a moment of cold terror I swung over the lever that would release the full force of the repeller rays.

There came a blinding flash; the room seemed filled with whirling lights and the smell of burnt rubber. A defective wire somewhere had failed to carry its load. The repeller ray was out of action, and outside the swarm was bearing down on us with a speed perhaps equal to our own.

In that half second's pause—I doubt if it was even so much as that—the full meaning of it raced through my mind. Some tramp skipper had kicked the swarm off its orbit, perhaps with the full power of his repeller rays, perhaps with a blast of his tubes, more likely with both combined, had flattened out the curve of the swarm's trajectory, and had been too dilatory to broadcast a warning. But even that would not have mattered had Hasken been paying attention to his work instead of entertaining the girl.

Yet in the last analysis it all came back to some defects in the wiring. The installation as well as the spares must have been of bad quality. The warning lamps had merely flickered instead of filling the room with virulent red, and to top it all off the power wires to the rays had laid down the moment they were called on to carry the full load.

As I say my mind grasped all this in a fraction of time almost too small to be measured by any accepted standard, then on the heels of that the ship dipped and plunged, we were thrown hither and thither, and abruptly I became aware that the air was beginning to whistle from the room.

*Actually there is neither day nor night in free space, but for convenience of reckoning the fiction of daylight and dark is kept up and planet times adhered to during the voyage.

I MANAGED with an effort to get the door shut, and pressed the studs that made it air-tight. Only just in time. The atmosphere of the room felt thin already. I gasped a little as I breathed. The girl was slumped on the floor face downward. Whether she was injured or not I could not say at a glance. To my amazement Hasken had vanished. I could not make it out at first, it looked so like magic. Then I recollected that I had last seen him standing between me and the door. I even had a vague impression that he had been leaning against it. Well, if that were so he must have been flung by the impact out into the corridor outside. The chances were that he was already dead. I dared not investigate. To do so would mean sacrificing the girl's life and mine, probably needlessly.

Long as it takes to tell, what had occurred could not have occupied more than half-a-minute at the least. Yet the room was already beginning to feel cool, the power of the heaters was waning.

The girl was climbing slowly to her feet, a look of intense bewilderment on her face. She was not injured, that much was obvious. The breath had merely been knocked out of her, and she had lain for a second or so, dazed.

"What has happened?" she asked in a queer dreamy sort of voice.

"I can't explain now," I said. "It will take too long. Have you ever used a space-suit? Well, you'll have to climb into one now, and as quick as you can at that."

Emergency suits hung on hooks against one wall. I drew down two, showed her how to get into hers, adjusted the helmet on her head, and then put on mine. Even should the freezing cold of space creep into the observation, as now seemed likely, we were secure against it as long as the tiny motors in our suits ran to heat us, and the air in our reserve tanks held out. At the best we had some twelve to fifteen hours of life ahead of us in which to do something to further prolong our existence.

But once we had made ourselves temporarily secure I cast about to see what exactly had happened to the ship. Fortunately the television screen that gave us an outside view could be run from batteries in an emergency, and though the power was very weak it was enough for my purpose. In a little I was able to scan the round of the void outside.

It was then I got my first big shock. The swarm of meteorites had done greater damage than I had imagined. Two sections of the *Sirius*, the fore part and amidships, were drifting beneath us in the void, but for long I looked in vain for the after part. Finally I located a number of fragments scattered over a wide area, and from the disposition of them guessed much what must have happened. The engines, located in that rear section, had exploded, blowing the after part clear to bits. Not improbably it was the kick of that explosion rather than any impact that had thrown us about the room.

The observation tower itself—more properly it was a dome in shape—had, by some freak of chance, been shorn clean off the parent body of the *Sirius*. We were now floating free, a little world of our own adrift in space!

CHAPTER IV

Death by Inches!

THINK of it. Twelve to fifteen hours to live at the outside unless some miracle occurred. The rest of our ship's company, nearly a hundred between passengers and crew, undoubtedly already dead. And such a little thing to have caused it all. A defective piece of wiring. Carelessness in inspection or carelessness in fitting—who could say whose fault it was initially?

The greater miracle though was the fashion in which the swarm of meteorites had cut the ship in three and had sliced our tower from the top of the hull. Actually none of them had been clean cuts. Part of the marsonite alloy of the *Sirius* still clung to the floor of the room we were in, and I could see that the two remaining sections of the ship showed jagged edges and gaping holes.

I wasted no longer viewing than was necessary to tell me what had happened. The emergency power units must have been snuffed out in the ship as a man snuffs out a candle, for ice was already coating thickly on the ragged edges of the disrupted main sections. The air in the observation room, too, must have all escaped through some undiscoverable filter-hole, some leak in roofing or decking, for the rime was thickening on the walls about us. The sight brought the thought of a new terror to my mind.

While yet there was some power left in the emergency sets I must try and signal in the faint hope that I might be able to call attention to our plight. I would have given much for the use of the helio tubes with the full power of the ship's plant behind them. As it was I could do no more than send out a series of impulses with the weak current left us, and trust to luck that they affected some ship's recording instruments enough to be recognizable for what they were. Futile hope.

I worked till the current was exhausted and the tiny glow faded to nothingness as the light in the tubes died away. Then at length, having done what pitiful little I could, I turned to the girl. I had not spoken to her since we had donned our space-suits.

"If you want to talk," I said, "there's nothing to stop you. There are audiophones in these suits."

"Oh, I did not know. I've been wondering, afraid that I might not be able to hear a human voice again. Tell me—I've been blaming myself all of this time—how much of what has happened is my fault?"

What could I say? I hesitated a little, then, deciding, briefly told her the exact bitter truth.

"I see," she said. "In the end the blame goes back to someone of whom we know nothing. But I can't help thinking—I shall never indeed be able to banish the idea from my mind—that if I hadn't done what I did, if I had left him alone with his work, this—the worst of it—might have been avoided."

"Perhaps," I said gently—her voice sounded so broken, so condemnatory of self—"if you had not come you would not be alive now."

"Others as good—better—just as anxious to live, have gone," she answered bitterly. "For which I am not altogether free from blame. To think that we two, of all them, should be saved."

"Our safety isn't altogether a matter of certainty yet," I pointed out. "It's better that you should know the exact truth. Our air-tanks will last a matter of twelve to fifteen hours, mine the shorter, yours the longer period. Question of physique . . . and other things account for the difference. I may be able to find extra cartridges to put in the air-tanks. I'm not sure. Usually there should be a reserve supply kept with the space-suits. But things seem to have been scamped on this voyage somehow."

"My father couldn't have known it," she asserted. "When I get back . . ." She stopped abruptly. "I mean *if* I get back," she said lamely, "he shall hear of this."

She made what perhaps she intended to be a movement towards me, but in our practically weightless condition—the gravity mechanism was dying with the rest of the plant—it became no more than a grotesque plunge. I reached out, caught her by the arm of her space-suit, and managed to anchor ourselves . . . in a fashion.

"Tell me," she begged, "at the end of that time, those

hours you have mentioned, if no rescue comes, what will happen then?"

"Nothing much," I said evenly. "We shall cease to be, that is all. But"—why let her get morbid about it, I reasoned—"all those hours have yet to run. Anything may happen before they expire. I have sent out signals." But I dared not tell her how weak they had been at the start, how even in the end they had faded to mere ghosts of themselves, faint, futile things. I left her one shred of hope to which to cling. Humanity insisted that I did at least that.

"A ship may have heard you," she suggested. "A liner, perhaps a Guard-ship. The void, they say, is crowded nowadays."

A mere figure of speech, a pardonable exaggeration. Only those who have crossed it this way and that know of the uncharted infinities of space and the difficulty of finding in it such motes as we were. I had no means indeed of knowing how far from the narrow space-lane we may have been shot by the combined explosion of the rocket engines and the impact of the meteorites. For all I could say to the contrary we may have been a few thousand miles off our course. Most probably we were.

HAD we had something to occupy our minds things might not have seemed so bad. But there was nothing to do save sit down and wait. The seconds dragged slowly away; the minutes were of immeasurable length; the hours stretched to infinity . . . .

As time progressed and nothing happened the girl's first sanguine hopes sank steadily. Mine had never been very high, even at the start. She had grown curiously subdued, more than a little ashamed of herself, too. I could see that. She had come to realize that her own place on the Earth, the wealth and power of her father counted for nothing against the awfulness of the cosmic doom slowly creeping towards us. I, a nonentity, would fare just as well or as ill as she. Fate would make no discrimination between us.

I felt sorry for her. I came to realize it very gradually, piecing this thing she said to that at which she hinted. For an hour or two at the beginning I had busied myself taking an inventory of everything in our little cabin. There was not much, certainly nothing that could be of any use. Such mechanisms as there were depended on power. With the power gone they were simply inanimate metal. I could do nothing save sit with folded arms.

(Illustration by Paul)

"I caught a glimpse of whirling black bodies, a trail of them bearing down upon us."

How long the little motors that heated our suits would run I could not say. Twenty-four hours I imagined. It did not matter. They would outlast us, at any rate.

One thing I found. A reserve air cartridge. Only one, no more. Had there been two . . . . But there were not.

I said nothing about my discovery, decided to think the matter over first. Only one of us could use it, to only one of us could be given the chance of a few extra hours of life. But the question was which. I doubted very much if there was the least possibility of our being rescued at all. Suppose I did turn the extra cartridge over to the girl, gave her that much extra chance of life, what good would it do? In that case I certainly would pass out first. She would be left to face alone the choking horror of the end drawing nearer with each breath she took. The terror of it might well drive her out of her mind.

I decided to say nothing at all about it.

I might have saved myself the trouble of coming to this decision. I should have known that though the daughter of Jens Fontaine might be many things of which one certainly did not approve, she at least would be no fool. Through the thick glassite view-plate of her helmet's front she had watched my every movement, had said nothing, but had drawn her own conclusions. She asked no questions, merely waited until I showed by my attitude that I felt there was nothing left that I could do.

"Tell me," she said at length, "what lies ahead of us?"

"What do you mean?" I asked, wondering.

"You were looking round the cabin, examining many things, with the hope, I presume, of finding something that might be of help to us. You come back here to me, seeming to have found nothing. Is that so, I wish to know?"

A touch of the imperious in her tone which I was too utterly mind-weary to resent. Her phrasing was more that of a demand than a question. Adversity had not quite tamed her yet. I doubted if ever it would. I'm afraid I liked her none the less for this display of spirit; equally it irked me when directed at myself. Today when we have advanced so far and so perfected the mechanical side of our civilization there is one thing we have not altered, would not if we could. When it comes to a crisis the fundamentals of human nature remain the same whether the time be the Stone Age or the Scientific Era. Few would have it else.

I had not the will to fight against her insistence. Something that should have been unyielding in me had snapped in the last few minutes. I felt a compelling urge that she should be told. Yet I did not answer her. It was easier not to.

She caught me by the arm. Through the insulated fabric of my sleeve I could feel the hard pressure of her mailed hand.

"I saw you pick up something," she said. "I know little of the ways of space-ships—I admit that. If I did I would not have been such a fool as I have been—but what I saw looked like the cartridges in our tanks. I believe it was one, am almost certain of it, in fact. Tell me—I insist on this—was it an unused one or not?"

I did not answer. She tugged at my arm.

"Tell me, tell me," she insisted.

"What does it matter?" I said wearily.

Of a sudden she pressed the glassite pane of her helmet close to mine. It was the only way she could see my eyes. I believe she fancied she could read there the truth of things.

"I think," she said, ever so slowly and deliberately, "that it was an unused cartridge. I think, too, that you would have said nothing until you slipped it into my tank and it was too late for me to refuse. I think all that, because it seems to me that you are that kind of a man."

NICE praise from the girl who only a day or so ago had told me she had the power to get me disrated for insolence! I had it on the tip of my tongue to ask her if—should a miracle occur—we got back to Earth would she change her mind and influence my promotion. But I did not. Now at least she was sincere in what she was saying—that I knew without a doubt—and so I had better let the matter rest.

"Perhaps so, perhaps not," I said under pressure. More than that I would not admit.

"Well, as you wish, tell me or not. But now I have my suspicions. You may not sacrifice your life in the effort to preserve mine. You understand that? And—would you think the suggestion overbold, the sort of thing in keeping with what you have learnt to expect from me—if I asked that as the end draws near we may creep closer together, die as it were in . . . in each other's company?"

Perhaps she intended another word in place of that last. Perhaps she did, yet thought the mouthing of it might sound overbold—her own phrase—and chose instead of "arms" the less intimate euphemism.

"Don't talk of dying," I said sharply. "We have not come to that yet."

She shook the ungainly bulk of her helmet slowly. "There is nothing else," she answered. "I have thought it out. The chance of our being rescued—specks of dust afloat in the infinite—is a very remote one indeed."

It accorded so well with my own conclusion that I felt I could say nothing counter to it without betraying the worst of my fears.

The hours dragged on. It seemed to be getting colder. Perhaps the power of the motors heating our suits was beginning to run down. Perhaps we were feeling weak from want of food and drink. Our spirits no doubt were flagging. The thinning air from our tanks was having its effect on us. Soon the curtain would fall. But before it did . . . .

I hauled myself slowly to my feet. We were weightless now. I dare not use up the power of the motors to give our suits an artificial gravity. Besides it would not matter one way or the other. Carefully I hauled myself across the cabin, moving from one hand-hold to another, seized the cartridge and giving it a gentle push let it float back towards the girl. She tried to grasp it, miscalculated, and shot towards the ceiling, floating there helplessly.

I anchored myself with one hand, with the other reached up, caught her ankle and without an effort drew her down. The cartridge was still floating about in the weightless void. I recovered it.

I had her anchored in the crook of my arm. Before she quite realized what I was doing I had reached up, plunged the cartridge into the clip of the tank on her back, and pressed the tiny lever that allowed its contents to pass into the tank. It took about one second and a half to do it all.

She threw herself away from me. If I had been able to see her face I would not have been surprised to find it dark with anger. Her voice shook when she spoke.

"You're a fool," she said, "but a dear chivalrous fool, and I love and respect you for it. You've given me a longer span of life than yourself, but—"

"But what?" I asked, as she paused.

"It does not matter," she answered. "It was something I had better not say, that is all. Will you please show me how to read these gauges?"

I hesitated. If I did she would know just how long she

could expect to exist, could watch each minute flitting away and know the end was drawing ever nearer, could tell almost to the second when life should be snuffed out at last.

"Don't add a further foolishness to what you have already done," she said, almost angrily. "Please tell me. I am not afraid to know."

Seeing she put it that way . . . . I showed her how the little dials worked, and how to read the movements of their tiny hands. She stared at hers, and compared them with mine.

"And this?" She touched a tiny little arrangement like a stop-cock situated close to the dials. "What is it?"

"Don't touch it," I almost shouted, and her hand fell away. "That's a valve for deflating the suit, altering the pressure, letting the air out altogether when necessary. But keep your hands away from it."

"Like this?" she said quickly, and turned it. Through the audiophones I heard the hiss of escaping air.

"Turn it off, quickly," I cried, and lurched toward her.

"Keep back," she said determinedly. "If you don't, I'll wrench the valve completely off, and settle everything in the one action."

I held my hand. I was so sure she meant it. The determination in her voice alone would have told me that.

"But, Gods!" I cried in an agony of dread, "Do you realize what you are doing?"

She glanced at the dial. "I do," she said, and closed the valve. "I refuse to take an unfair advantage of you—that's what it amounts to—and I've let out so much air that, as near as I can gauge, we are now running a level. A few minutes either way, but what does that matter? At least your heroics will not mean my salvation at your expense."

Of all the fool things I've ever seen or heard of this was the worst. The sort of thing she would do. It was quite in keeping with what of her character I had seen. An odd blend of heroism and insanity. Well, nothing was to be done about it now. The air she had released had no doubt seeped out into space.

Time passed . . . .

. . . I drew her close to me, my arm about her, the ungainly helmet pillowed against the fabric of the shoulder of my suit. I was finding a difficulty in breathing. I think it was the same with her.

She spoke once. "This," she said, finding voice with an effort, "makes up for all my regrets. I have none now. I have paid for everything."

I was not quite sure what she meant.

The air in my helmet became heavier, fouler, more mephitic. Something in my head seemed straining to burst. My heart was pounding. Lights danced before my dazzled eyes. An inexorable pressure increased about my throat, like an iron band constricting.

Gods, this was asphyxiation!

Something in my head twanged like a taut piano wire suddenly struck. Then came oblivion.

CHAPTER V

A Secret Journey

"HE'S coming round."

"I didn't think he would. It's been a near thing with him, touch and go."

I opened my eyes to the sound of voices in my ears, men's voices. For the moment, such was the utter confusion of mind into which I had been thrown, I found it hard to disentangle one memory from another. I had an idea that this was a hospital of sorts, for the air seemed full of those mixed odors that one invariably associates with a sick bay.

"An infernal nuisance," said the first voice. "We'll have to take him with us. We can't put back now."

"Hush, he'll hear you," said the other. "He's stirring."

My eyes came right open. It cost me an effort, but it was worth it to see for myself that I was back in the world of men again. Recollection of those last crowded seconds flooded back to me, the foul mephitic odor of bad air still seemed to linger faintly in my nostrils.

But this, what was it?

"Where am I?" I asked, a trifle weakly, I should imagine.

The man who had spoken first, a spare, lean-faced man bent over me.

"You've been rescued, saved just in the nick of time," he told me. "That much will have to do for the present. You're in no condition to talk now."

"But the other . . . my friend . . . . the girl with me?" I queried.

I saw one man nod to the other. "Better tell him," and at the words my heart—oddly—missed a beat.

"Oh, she's all right," came the reply. "Better than you by a long sight. Not so far gone when we found you. More air in her tanks. Perhaps she didn't consume so much."

I smiled. I had to, when I thought of Paula Fontaine's lung capacity compared with mine.

"She's alive then?"

"And almost ready to get about. You may see her—later—when I think you're both fit enough for it. Meanwhile, it's enough to know you're mending rapidly. I'm anxious to hear your tale, but it, too, will have to wait, just as ours will. Food? Perhaps you feel famished?"

The other, a short man, inclined to be stout, interposed before I could answer.

"In a little, John," he said. "Leave that to me. Better let him rest a further while. He'll enjoy creature comforts all the more then." To me he said, "We'll come back in an hour or so, and see then what needs to be done. You will be watched. Someone will look in every little while. Not that there's any danger. You've passed that point now. Meanwhile, if you wish for anything touch this bell . . . but only in an emergency, you understand."

He pointed to a bell-stud set in the wall near the head of my cot. I could just reach it.

They left me, a prey to conflicting speculations. I was past wanting further sleep, content merely to lie there and turn over things in my mind. So Paula was alive. That was good news. What had been done then had not been altogether in vain. But where were we?

On a space-ship, that much was obvious. Both men had worn a uniform of sorts. They did not belong to a liner, however. I knew all the space companies' insignia. Neither were they of the Interplanetary Guard. There was none of the stark simplicity of that service about this room, hardly a sign of disciplinary marks on the faces of the men themselves. Anyway no Guard ever goes without his uniform unless he is on leave, and that uniform itself shouts its owner's trade halfway across the Universe.

Then who were they? I could think of no answer, save one that did not altogether fit in with possibilities. They might be space vandals, such things were not unknown even in these enlightened days, but I was hardly pleased with this solution of the problem. Yet their secrecy, their evident unwillingness to tell me too readily the name of their ship and their possible destination hinted at something not for general consumption.

I gave it up. It was pleasant to rest here and know that the danger was over, pleasant to idle and dream, too

much of a fag to speculate when the data on which to build was almost a minus quantity.

I must have dozed. Perhaps I even slept. I had no idea of time, you see. A hand on my forehead, a whispered voice close to my ear awoke me. Likely though I had been more than half awake already.

"You!" I exclaimed.

"You mustn't get excited," said Paula Fontaine. "They allowed me in for five minutes to see you on just that one condition. I think they can hear you; I would not be surprised if they could hear and see everything we said and did."

"We'll take the chance of that," I said sturdily. Nevertheless I lowered my voice a tone or so. "Tell me, well, everything you can. I can listen, that won't be breaking the bargain."

"THERE'S not much to tell," she said, smiling. "We're both alive and well, and that's the main thing after all. They say there's no danger with you now . . . . I'm glad for that. Myself, I don't know." Her forehead wrinkled, a light I did not care to see came into her eyes. "I can't get the feeling out of my head that I was much to blame. If I'd only had the sense . . . . Vain, like a peacock, seeker of new sensations, proud to have a man like Hasken—poor dead boy—dance attendance on me to the neglect of his duty. Could that girl be I? It seems so long ago. I seem to have learnt so much in the interval. Outgrown her, lost patience with her follies and her wilfulness. Can one be cured of that overnight, sobered in an instant?"

"If I were you I wouldn't think of that part of it," I told her.

The tragedy had left its impression on her. She seemed older, steadier . . . . but at what a price! Gone was the drooping pettishness of the mouth, the chill of contempt in the eyes. Instead a warm friendliness. So I took it to be.

"I'll try not to, as you wish it so."

"For your own sake, do. But tell me what have you learned about this ship, our rescuers, their destination, anything . . . . ?"

"Little," she said. "They're uncommunicative. Oh, they sighted us all right. I fancy they must have been keeping a sharp look-out. Then, too, from the little they've said I imagine their instruments are considerably more up-to-date than ours were on the *Sirius*. Seems they had to cut through the glassite of the observation dome to get us out, cut through with a blow-pipe."

"But how?" I queried. "I couldn't imagine them working that way in free space."

"Neither could I. So I asked them. They told me that much. Seems they clamped the dome up against their air-lock port with their magnetic attractors, sealed the edges against air-loss, and worked that way. Cut a section out and rescued us, just in time."

"But, however did they know there was anyone inside? Did they just take a chance?"

She shook her head. "They told me they saw us," she answered.

"Saw us?" I could hardly credit that. The dome was of stout glassite, not transparent. Our observations had been done through view-plates. How could they then see through an impervious substance?

"Saw us?" she repeated. "Yes, that is what they said. I didn't pry. They may tell us or they may not."

"And the ship? Its name, have you got that?"

"They didn't tell me. They were inclined to be evasive about it.

"And their destination?"

She smiled, a little sadly. "That was the one thing they told me flatly was their secret . . . . for the time being at least. They said it quite nicely, but . . . ." The way she left the sentence unfinished indicated a vague fear in her mind.

"Don't worry," I assured her. "Wherever it is, we're going there. I know that much. I heard one of them say as I came out of my stupor that we would have to come, that it was too late now for them to turn back and put us off. So now we'll know soon enough."

"But my people, my father will be worrying."

"I'm sorry for that. Later perhaps we may be able to do something about it. But I . . . . I have no one to worry over me . . . . anywhere!"

"I'm sorry. I'm selfish, thinking of myself. But do you think that . . . . that you have no one anywhere who will worry over you?"

"Perhaps not now," I admitted. "It is coming to me that in that regard I am not altogether alone in the world."

She caught my hand, leaned forward, a light in her eyes . . . .

The door opened softly, yet not so softly that we did not hear it. The tall, lean-faced man was standing there. His eyes fell on Paula. His look was not unkindly.

"Pardon me if I interrupt," he said, "but we have definite orders against exciting our friend. Also I wish to talk to him, if I may."

There was just the faintest undercurrent of sarcasm in his voice, a gentle note of irony that yet was too fleeting a thing to resent. Paula rose to her feet.

"I'll go," she said shortly, but the glance she flung me showed that any annoyance she felt was not with me.

"If you please." Suave, polite, the other stood aside to let her pass, held the door open for her, and closed it carefully after she had gone.

He came back to my side.

"Well?" I said.

"May I introduce myself? My name is John Rifflin. I am commander of this ship. I know something of you . . . . your name . . . . The girl has told us a little, mainly that she is a Fontaine."

I did not quite like his tone when he spoke of Paula, yet I had sense enough to realise that any grudge he might hold—it seemed not unlikely that there was one—was rather against the name than the present possessor of it.

OLD JENS FONTAINE had not made himself loved in his dealings with his employees. Witness my own dissatisfaction. It was whispered that it was the aim of himself and his company to dominate Transport, to gather under the one control all forms of conveyance whether on the surface of the planets or in the void. An ambition that not unnaturally most people resented, even while they remained powerless to frustrate it. If he succeeded it would mean that no one could run and operate even the smallest private space- or aero-car except under a license from the corporation in which he was the dominant figure. Only the Guards would be free from interference, and who could say that they might not eventually come under control, their reputation for disinterested integrity gone at last?

"That much is correct," I remarked, seeing that I was expected to say something.

"It is unfortunate," Rifflin went on. "I would prefer not to have a Fontaine, of all people, on my ship at this particular juncture."

"The solution's simple enough then. Land us at the nearest planet port."

"I'm afraid it can't be done. It's about that mainly that I wished to speak to you. But first tell me something about yourself, your life, your hopes and your ambitions."

I don't know why I yielded. Perhaps there was something magnetic about the man. Or I may have had a vague feeling that it was in my best interests to do so. At least I told him what little there was to tell about myself. It seemed to satisfy him.

A thought struck me. "You said I was not to be excited. You sent Miss Fontaine away, I presume, because of that." I asked a question with my expression.

Rifflin smiled. "And I also said that I wished to speak to you. Have no fear. I don't mean to excite, merely interest you. There's a difference. However . . . . Navigational officer, you are, you say. Well, you may come in useful, Mr. Grayne. Extremely so. We've only one on board, though of course we're all more or less competent men. Still the expert, whose daily business the navigation is, is always the more reliable."

"Captain," I said—it seemed time that we had this matter out between us— "it looks as though we aren't particularly welcome visitors on board. We've come here through no fault of our own, that you must admit. But seeing a situation has arisen not altogether to your liking, suppose we try and face it. In other words, do you mind telling me plainly, bluntly, just why you find us undesirables?"

"I thought that was coming," he chuckled. "I do not know that your presence is so very undesirable after all. The trouble lies in its implications more than anything else. You want plain words, however. I'll give them to you.

"We are engaged on an expedition—of exploration, colonization, or conquest—whichever you care to call it. We are acting under the orders of the Council.* There has been a good deal of secrecy about it. Naturally. I presume you understand something of the situation that has developed of recent years. The Council are supposed to be supreme; they are chosen for their integrity, and not infrequently they have been members of the Guards. They have dealt well and fairly with the Confederation. They have placed the welfare of their peoples before anything else, and consistently refused to allow them to be exploited for purely commercial ends.

The big corporations like the Interplanetary Company don't like that. They are working in subtle ways to undermine the present system. They may succeed or they may not. If they had been able, they would almost certainly have prevented us from starting. Had they known enough, Transport, with Fontaine at the head of it, would have tried to cripple our ship sooner than let us get away."

"I presume," I interrupted, "that you are heading for one of the unexplored Outer Planets. There have been rumors about, you know."

"But nothing definite. No one could say anything with any degree of certainty. However . . . . Had we been hampered at the start, our take-off postponed so that a ship of the Interplanetary Company could have got away first, imagine what might have come about. A new world taken possession of, opened up for colonization and exploitation, all in the name of the Interplanetary Company or one of its kindred corporations. They would be able no doubt to keep the new world out of the Confederation, perhaps ultimately to break it up, or more probably mould it to their wishes. You understand?"

I did. It was not hard to visualize possibilities. New metals, new peoples, perhaps new scientific wonders, all tending to strengthen the hands of the corporations. Of course in our close-knit universe there always is a source of danger in a world in contact with us, but outside our circle of alliances. A world that might give the corporations such power as they had never held before. No need to enlarge on it. At least I could see quite plainly why each new world must be protected from the beginning from those who would exploit it for their own ends, and through it the known universe. The history of discovery and exploration in our own planet bristled with warnings enough.

"Go on," I said. "I'm getting interested in this."

"We made our plans under Council orders. We worked in secrecy, gathering material for our expedition. No one save the Council and the actual members of the expedition knew just where the real preparations were going forward. We had dummy camps in Alaska, in Matto Grosso, and in the Sahara. Our real jumping-off place, however, was in the dead heart of Australia, the one continent where we were almost certain to be free from spies and chance supervision. Yet something must have got out towards the end. Attempts were made to reach and delay us. We could not afford to wait. We hurried on our preparations and took off sooner than we had planned. As a consequence in certain respects we were not able to carry out our plans as we had intended."

"But isn't there just a possibility that your rivals will send a ship on your track?"

Rifflin shook his head. "Not now. We have got away. If they could have delayed us there might have been a different tale to tell. But they have no ship in commission capable of doing the distance, and carrying the necessary supplies. It would have taken them months to build one . . . . This, indeed, was the reason why they were most anxious to delay us at the start. But here we are . . . . Outward Bound. You know so much now. You would have found all this out sooner or later, but I and my colleague decided to take the chance and tell you at once. Concealing nothing. In return may I ask what allegiance you owe to the Company that employed you?"

I made a wry grimace. "I've no particular love for them," I told him. "I was seriously considering the advantages of leaving their service. Too much influence against me."

"So? None the less you've given them of your best despite that? Perhaps I should not ask that. Putting it bluntly, are you willing to take service with us and give us your loyalty?"

I thought round that. Almost certainly I would not get another ship when I got back. My service had been terminated automatically in all probability. But there were other factors to be considered, matters not altogether unconnected with the girl, Paula.

"I can promise you service and unquestioning loyalty until we return to Earth," I said at length. "If you wish I can add that such discoveries as the expedition makes will be kept secret by me as long as you require."

Rifflin laughed. "No need to promise that latter," he informed me. "The more publicity our discoveries receive on our return, the more the hands of our rivals will be tied. What we had most to fear was that discoveries might be made by private expeditions and kept secret for the use of those who financed them. No, your promise that I asked is all that we require."

"And the girl, Paula?" I asked.

"A Fontaine." He frowned this time. "You think something of her?"

I nodded.

"It is awkward," he mused. "A Fontaine, of all people. Does she in her turn think something of you?"

I hesitated. What could I say? A look, the touch of a hand, a sentence whispered, but not finished. Such frail things on which to build up hopes.

"I believe so," I said, and left it at that.

*The Council of Three a Venusian, a Martian and an Earthman, the supreme governing body of the confederation of the three Inner Planets. The system on which they are elected is modeled on that of the Presidential elections of the United States.

He looked at me curiously. "Not quite sure, are you?"

I passed that by. "At least she cannot harm us," I pointed out. "For my part I think much of her. If I could go surety for her in some way . . . . "

Rifflin shrugged his shoulders. "It may not be necessary," he said. "If any such idea arose, it would be that she should be surety for you . . . . But you have given your word. We shall have to talk it over, my colleague and I. The question though may not arise until it is necessary for us to return to Earth."

There fell a silence. Apparently he had nothing more to say.

"I can give a good guess where we are going," I said. "As I told you—despite your secrecy—there were rumors about. But I would like to hear from your own lips your destination."

"As you already seem to know," he smiled, "there is no harm in telling you. Our intended destination is Planet 8."

Neptune! So Brent had been right after all.

CHAPTER VI

Toward Jupiter!

I WAS allowed up after the lapse of two more periods of twenty-four hours. The short, stout man—he introduced himself as Johnson, the ship's doctor—pronounced me fit then, and capable of taking up the running. He informed me that I would feel no ill after-effects of my adventure now. I could have told him that. In my own mind I was certain that I had been kept to my cabin longer than was absolutely necessary, and I quested about for a reason.

Thinking it over the only conclusion I could come to was that Rifflin's conversation had by no means clinched matters, and that sundry other tests, of whose nature I was ignorant, had no doubt been applied before they felt satisfied about me. I could hardly blame them for their caution. You see, they had to take a good deal of my loyalty on trust. Apparently, however, my reactions had been favorable, and they were now prepared to allow me the run of the ship.

I had not seen Paula Fontaine since the day she had left me to give place to Rifflin, and I wondered what had happened to her in the meantime. The chances were that her absence was part of my treatment. Such questions as I asked about her were answered with apparent candour, though I seemed to sense some undercurrent of evasiveness. The thought did strike me that she was ill, but I resolutely thrust it from me, mostly because it was not the sort of idea I cared to dwell on. So great a hold had the girl already got on my mind!

She was waiting for me, however, as soon as I emerged from my cabin, and she started towards me with a welcoming smile on her face.

"They wouldn't let me near you," was her greeting. "I wanted to see you again, to see for myself how you were getting on. But they told me that you must be left alone. Then just now they said you were coming out, that if I went up for you I could see you and have a talk."

"I'm glad." It seemed banal but it was the first thing that came into my head. "They must expect us, must mean us to have a talk then. It looks so like a hint." I wondered how much she knew, and how much of what she did not I should tell her. At least I had not promised to keep secret from her the nature of my conversation with Rifflin.

"How much," I asked bluntly, "have you learned about this expedition?"

"About all there is to know," she answered. Then at my look of surprise, "Oh, I know it doesn't seem the thing to trust the daughter of Jens Fontaine, but what can I do? Even if I wished to do something to harm them. Which I don't. On the contrary. I think I have convinced them of my sincerity. What I told them must have satisfied them."

"And what was that?" I asked curiously.

"No. No. I mustn't tell you . . . . yet. Some day perhaps . . . . "

"Concerning me, perhaps?"

She hesitated. "A little. Yes, in a way."

I left it at that. No use forcing her now. Vaguely I wondered what it was. I might have guessed, though I did not. In some things men can be wonderfully dense.

"But now"—she caught my arm—"we all have our appointed places on board. I have mine as well as you . . . . work to do. I must get back to it."

"You! Work!"

"Yes, I'm sort of a cook, in the kitchen. I asked for it . . . . something to do . . . . to work my passage. They seemed glad of my offer."

I stared at her. Was this the girl I had met wandering round the control level of the *Sirius* that night we had left the Earth? I could hardly believe it. Yet before our adventures were over I was to believe stranger things of her.

She saw the amazement on my face—work and she must hitherto have been such strangers!—and she smiled oddly. A queer trembling of the lips, shy, shame-faced even.

"But that doesn't matter," she went on with a tiny quiver in her voice. "I must go now. I'll see you again later, but"—again came that odd trembling—"I won't bother you in the control room. I've learned my lesson."

Then quickly she was gone, flitting down the corridor out of sight.

I was not sure where I should head, but I was saved the trouble of wandering idly, for no sooner had the girl gone than Rifflin came towards me. He must have passed her on the way, and the idea flitted through my mind that he had been watching and waiting until we were done.

"Grayne," he began, "I'm sorry to hustle you, but—feeling fit, are you?—I'd like you to take over some duties at once."

"Navigational?" I said, and he nodded with a quick jerk of the head.

"This way," he said, and led me along the corridor, and up to another level. On the way he explained, "We've a man in charge, working from the plotted course—you know the system?"

"A sort of quartermaster?" I presumed they followed the routine more or less common on all space-liners.

"Yes. He's in charge now. We've been working out things between us this last twenty-four hours."

"But your navigational officer?" Something in his manner struck me as queer.

HE looked me straight in the eyes, and then I saw what I had not noticed before, that his face was white and tense.

"We have none now until you take over," he said unsteadily. "Adams—our man—died an hour ago."

"Died?" I echoed. "An accident?"

"No. The *seng*-sickness.* He caught it years ago in

*Seng-sickness. A Venusian disease, by some supposed to be medical in its nature. The Venusians themselves seldom experience more than mild bouts, though it attacks Earthmen with particular virulence. Strangely enough the Martians are almost immune. The sole cure—at any rate the most successful—consists in direct exposure to the sun's rays in atmosphere. Nowadays sun-ray plants have been erected to deal with it in all Earth colonies on Venus. Seng sickness in its final stages, when the body begins to turn purple is particularly nauseating to the victim's attendants. Rifflin, no doubt, had this in mind in his reference to Miss Fontaine's work.

Venus, got over it—the usual treatment—and reckoned he was cured. But they say it gets into the blood and may remain dormant there for years. He was quite all right when we left Earth, but just about the time we picked you up he took ill. Maybe it was the close confinement of the ship and the air we're using that did it. Stirred up the germs in his blood perhaps. We couldn't save him, though we tried all means at our disposal. Even Miss Fontaine . . . . She nursed him, you know?"

"She didn't tell me *that*."

"No? Perhaps she's that sort of girl. I'm beginning to fancy she is. However, here we are . . . . "

He opened the door. The room was more or less familiar to me as far as its appointments went, though I could see even at a glance that most of the instruments embodied improvements on those to which I was used. The differences however would present no difficulty.

"And just precisely where are we now?" I asked.

"Crossing the asteroidal belt."

"Through it?"

Rifflin shook his head. "No, above it. When Adams went sick we decided it was too risky to go through, seeing the state our navigational calculations were in, so we lifted to a higher ceiling. We're above the average plane of the orbit. It's probably thrown our calculations a bit out of gear, but you'll easily pick up, I should imagine."

I nodded. It would mean a good deal of involved working, and probably the recasting of the table of our relations to Jupiter, so the sooner I got down to it the better. The attractive power of that world was not the sort of thing one could take liberties with. However, with the help of the standard logarithm calculations I thought I could get it out in reasonable time.

"But someone had better check me through step by step," I suggested. "I suppose you've got some one who can."

"Of course, we're all more or less competent in that regard, though none of us has done navigational work as a regular thing. Perhaps I'd better set to myself with you as I'm here on the spot."

It was tedious work, but at length it was done to our joint satisfaction, and I turned to putting the results into practice. Rifflin remained with me, so that he might explain any new gadgets that were unfamiliar to me. Actually there was nothing whose precise function I did not understand, but practically all the instruments were of greater precision and admitted of more fineness than those I was used to on the space-liners. Also, an added difference, signals was not a department by itself. All the transmission work was done from the room I now occupied.

I wondered why Rifflin should have gone out of his way to show me the transmitting apparatus. If I had the faintest intention of sending out signals without his or his colleagues' knowledge he was going the right way to put temptation in front of me. I need not have given myself the trouble of speculating about it. Sooner than I expected it was made plain to me that either way one cared to look at it he was taking comparatively little risk.

It was some time later, however, before he broached the subject.

"Have you any friends or relatives who might be worrying about you?" he asked casually.

"No," I said. I did not quite realize at the moment what he was driving at.

"I see. No one in the whole of the Universe whose mind might be made the easier for knowing that you are still alive?"

"No one, absolutely no one," I told him, "unless, of course, you take Miss Fontaine into consideration. But then she's on the ship."

"I've been thinking about her," Rifflin confessed. "In fact we all have. If you'd seen the way she stuck to it the last twelve hours or so, helping nurse Adams . . . . " He made a wry grimace. "A man in the last stages of *sang*-sickness is not a pretty sight, and she's no trained nurse either. Our estimation of her has gone up a good many notches as the result of that."

HE paused. "Well?" I said. I felt something fairly momentous was coming.

"It's a pity she's a Fontaine," he went on. "A pity Jens Fontaine is her father. None the less I suppose he has human feelings, can know human anxieties and worries where his own are concerned. A mother perhaps . . . "

"Her mother is dead," I interrupted. "I can tell you that."

"Good. It simplifies things a bit then. However, seeing how she's behaved I think that in her own interests—she might be worrying because her father might believe her dead—it would be a good thing to send him word."

I stood aghast. It looked so like an abrupt abandoning of those principles of caution that seemed to have characterized the expedition from the first. Rifflin must have read the surprise in my face, for he chuckled softly.

"Oh, no," he said, "I've no intention of sending off a message to the old man to the effect that his daughter and a man named Grayne, sole survivors from the wreck of the *Sirius*, are at present on board the Interplanetary Council's space-vessel *Icarus*, safe and sound, somewhere in the vicinity of the asteroidal belt, and heading for Planet 8. Nothing of the sort."

"Then how?"

"It's quite simple. The message will contain all that he need know, that his daughter is alive and well, that she has been rescued by a ship which should return her to Earth within six months, and that he has no need to worry on her account. But—just mark this, Grayne, for your own future guidance—that message will not go out in Earth English or any language of the planets that you know. It will be sent in a special code that the Council keeps exclusively for messages of its own. As an extra safeguard it will be sent as a series of light impulses—not flashes—that only specially designed instruments can detect. In that way we send all our reports of progress, and this particular message will be embedded—that's it exactly—in a report that will be sent off at the end of this work-day period. You follow?"

I followed him well enough to be able to fill in the lacunae in his explanation.

"In other words," I smiled, "no one but those who receive the message—presumably they are sworn to secrecy—will have the faintest idea in what part of the void we are. Fontaine will have to content himself with the knowledge that his daughter is safe and in good hands, and that anyway she'll be back on Earth just about the same time that she would had she completed her projected tour of Mars."

"That's it in a nut-shell. You may tell her when you see her. But"—he looked at me significantly—"I would prefer that you did not see her here."

"We have already arranged that between us," I told him. "She realizes that this is work that does not permit of distractions."

He said nothing to that, though his smile was oddly twisted. I think he must have guessed what had been in both our minds when she made me that suggestion.

"I'll leave you then, Grayne. You know what studs to press if you wish to call for assistance? Good. You understand perfectly the whole system of signals? Better still. I'll arrange for your series of reliefs as soon as I

can. And—yes—we'll have to have someone up here with you when we're due to pass Planet 5. Myself probably; Waventry—that's our astronomical member—certainly. Till then."

He went out, leaving me to my own devices.

I swung my view-plates round. The plane of the asteroids was now rising up on an angle beneath us. The *Icarus* was inclining down towards Jupiter—Rifflin's Planet 5. Myself I can never get into the habit of referring to our planetary bodies by numbers, though I admit the idea has its good points in a Universe where each world calls the stars by different names. At least, for instance, it saves confusion to call our Earth Planet 3 of System One. There can hardly be any mistake about that.

Never before had I been so far out as this. Few planetarians had. The Earth colony on Pallas and the Martian settlement on Vesta were more or less the frontiers of the explored universe. Odd expeditions indeed—greatly daring—had landed on Ganymede, but reported it not worth the trouble of settlement. To date none of the other satellites of Jupiter had been visited, though the ill-fated De Castro expedition of 2117, which crashed on Jupiter itself somewhere in the region of the famous Red Spot, had intended including Io, Callisto and Europa in its itinerary.

The huge planet was now showing up uncannily close, though the thick clouds that veiled its surface prevented us from getting any actual view of it. The Red Spot itself, in about latitude 30° south was the most conspicuous feature of the disk. Our course had been deliberately set, I imagined, with the idea of giving the party a chance of studying it at quarters as close as was consistent with safety. Myself, I would have preferred to pass it by at a greater distance, but that part of the proceedings had already been mapped out before I came on the scene, and I could only carry out my orders.

Waventry, a likable little man, as little like an astronomer as one could imagine, came up when we were nearing our minimum distance, and he was followed a moment or so later by Rifflin. They had a special view-plate all to themselves, so their observations did not interfere with me and my work.

It was still a trifle difficult to see the nature of the Red Spot and Waventry gave vent to an exclamation of impatience.

Rifflin turned to me. "Any chance, Grayne, do you think," he said, "of us being able to coast any closer with safety? There's something wrong here. We don't seem able to get a good view of it."

I was just about to assure him that we were nearing our margin of safety now, when one of the warning bells tinkled, and I almost jumped from my seat. The hand of the speed-dial was creeping round . . . creeping round . . . For a split second I blinked, scarcely realizing what it meant, then the full horror of it swept over me. The *Icarus* had somehow overshot the margin of safety and like the ill-fated De Castro expedition a century earlier we were plunging to we knew not what untimely fate on the cloud-wrapped surface of Jupiter!

CHAPTER VII

Deadlocked!

MY startled exclamation brought the others round quickly to face me. They could hardly have guessed what was wrong—their expressions showed they did not—for the increase in our rate of speed so far was not great enough to be perceptible to the eye. Had it not been for the extreme delicacy of our recording instruments I would not have noticed it myself.

"What's up, Grayne?" Rifflin snapped the question.

I pointed at the dial. "Our speed's increasing," I said uneasily. "There's some influence about . . . Jupiter's caught us, perhaps."

He looked over my shoulder at the dial. One had to stare a time to see the motion of the needle, it was so slow. Then he flung a glance at the space-chart, frowned, and gave it a closer scrutiny.

"Looks to me—I may be wrong—" he said, "as though we're the fraction of a point off our course. Too small to measure yet. There's always the chance of an error."

He connected up with the control-room and turned on the loud-speaker so that the three of us could hear what was said on both sides. The face of his second in command glowed in the vision-plate* set on the wall.

"I say, skipper," said the man whose face showed in the vision-plate, "what are you doing there? Someone monkeying with things? We're holding her on her course here, all right, but she seems to be edging away all the time."

"How much are you off now?" Rifflin demanded.

The other shot a stream of figures at him.

Rifflin nodded jerkily. "It looked more than that to me," he said. "However, I'll take it that you're right."

"Of course, I'm right. These detectors of mine don't lie. I'm turning on the gravity screens now, to be on the safe side. Giving them full normal repulsion. Stand by for results."

For the moment it seemed that nothing was going to happen, then the *Icarus* appeared to cant slightly. One end lifted a little. The other came up slowly until she was on an even keel.

"That should hold her," came the second officer's voice. "I think I've given her sufficient lift."

We stared at the dials. The needle held steady for so long that I was beginning to fancy we had overcome the trouble, but presently—a mere matter of seconds only it was, though to us waiting there it seemed years—the needle again began to creep slowly yet inexorably from the neutral point of safety into the zone of danger.

"Whew-ew!" The long drawn exclamation came from Rifflin like a cry of desperation. His face was white and tense.

A phrase swam into my mind, a recollection of what the second officer had said.

"Captain Rifflin," I said—my voice seemed not too clear; it felt as though I were on the point of choking—"full normal repulsion—that's what's on—doesn't seem to be effective. But—I'm not used to this *Icarus* yet—is that all that can be done?"

"What do you mean?" A sudden gleam of interest came into Rifflin's face. I think, intuitively he guessed something of what was passing in my mind.

"That—full normal repulsion—is graded for the inner planets," I said. "I take it so. But haven't you any reserve power? Jupiter's pull is nearly three times that of Earth, the largest of the three inner planets, you know."

"Oh, we have a reserve. I'm afraid to use it, though. I don't want to drain us."

I swung on the view-plate which showed us the world beneath. Jupiter was widening out. The cloud masses were taking definite form under our eyes. The Great Red Spot—thirty thousand miles of it—was lifting and swelling as we stared. So it seemed to our uneasy gaze.

"We'll just have to try," I said urgently. "If it's a choice between crashing to certain destruction there"—I pointed to the glowing Red Spot—"like De Castro did a hundred years ago, and draining the ship, I'd vote for the

*The vision-plate is used exclusively for communication between the various departments of the space-ship. The function of the view plate is to show the area outside the ship. Though in principle the functions of both view plate and vision-plate are much the same the difference of nomenclature arises from a desire to avoid confusion.

latter every time. At least it gives us a fighting chance. Then, though I don't quite know whether you can use them effectively, there are the rocket tubes."

Waventry swung round.

"The young man's right, Rifflin," he said. "His way we have a fighting chance."

Rifflin said nothing, but when faced with a situation such as this he had the ability to make up his mind with a reasonable celerity. He turned to the general communicator, and there followed a rapid fire of orders.

The lights in the observation room went dim. They were draining the ship of power. On the heels of that came the thunder of the rocket batteries. The ship quivered. Every plate, every fiber seemed shivering like a sentient thing. Titanic forces, struggling for mastery, seemed bent on tearing us asunder. I felt as if tugged this way and that. A vast oppression seized hold of me. Great weights dragged me down. An equal force appeared bent on pulling me the other way. Then abruptly the feeling vanished; we were conscious of an immense relief, and the sense of being torn between contending forces no longer afflicted us.

THE lights now were no more than dull red gleams, like the last dying embers of burnt-out fires. Our faces looked ghastly in the glimmer.

Rifflin produced a pocket torch, and thrust it towards the dial. It would have been impossible to have seen it else.

We all stared, three heads bent close together, crowding over it. For a space while a man could count ten, there was a tense silence.

"Gods!"-cried Waventry, "We're held in neutral."

It was only too true, what he said. All the power we were generating in one form or another was just sufficient to balance the pull of the mighty planet beneath us, by the barest fraction not just enough to drive us out of the circle of influence.

"Yates," Rifflin cried to his second, "can you push us up another notch? We're just holding our distance. Drain the ship, if you have to. We must get away."

Yates' white face, the little beads of sweat showing plain, stared at us from the vision-plate.

"If we can hang in equilibrium another five minutes I believe I can do it," he said in a strained shaky voice. "But—you'll have to do without your vision-plates. I'm cutting everything like that off to conserve power. And, yes, I'd like Waventry up here with me. Can he come?"

"Yes," Rifflin agreed. "Anything that will help. What's the idea?"

"Don't ask me. It mightn't work. You'll all know soon enough."

"Good." Rifflin closed down the vision-plate and the communicator. He turned to the astronomer. "You'd better cut along at once, Waventry," he said. "I think Yates knows what he's about. When he talks like that he usually has some idea up his sleeve. Seems to need your technical knowledge to help him out, though. I wonder . . . . "

He was talking to empty air. At the last word of the first sentence Waventry had gone out.

The light in the room had died completely, and we were left in darkness save for the white circle of Rifflin's torch. The keel rockets were firing with monotonous regularity now. Their thunder shook the ship. Helpless, unable to aid, we could only stand and wait, hoping against hope. We could not maintain this state of balanced equilibrium forever. The moment our power decreased we would inevitably be drawn down, or what was even worse, permanently disabled. We might become a satellite of the father of planets.

Abruptly the ship seemed to spin round. For one sickening second I thought we had started some sort of a spiral dive. But save for that instant's sensation nothing happened. Things went static again. Then . . . minutes later it seemed . . . came the dull red gleam of the lights. They flickered, grew in intensity, flickered and seemed like to die again, but did not. Their brilliancy increased, so that presently we were able to see by them again. The other instruments, too, took up their functions.

I sprang to the outside view-plates. The Red Spot beneath us was dwindling in size, Jupiter itself shrinking perceptibly before our gaze.

"He's done it," cried Rifflin with an air of relief, "but I'm damned if I know how."

He hesitated. I think he meant to call up Yates then and there, and question him, but apparently he decided not to do anything of the sort. Perhaps the work was not yet done. An interruption now in the middle of it might have disastrous consequences if Yates' attention were taken for a moment from his job. So we waited, trying to steel ourselves to patience.

It seemed ages before the vision-plate leaped to life and Yates' face glowed again.

"You can carry on," he said with a smile. "We've won through. I'm sending Waventry down to tell you how. But your navigational officer had better get busy on his observations and give me an entirely new course. We're 'way off the old one."

I took the hint, and went straight on with my observations. As I swung the view-plate round and worked on the results a glimmer of understanding came to me, some realization of how the situation had been saved. But it remained for Waventry to give us the full details . . . what little there were.

Our gravity screens, it seemed, were graded to ordinary planetary conditions, and normally would have worked to our satisfaction, but according to Waventry the Red Spot itself was composed of some unknown substance—he seemed doubtful whether to call it mineral or not—that was highly radioactive and at the same time exercised strongly magnetic influences. That, added to the huge pull of the planet itself, had succeeded in nullifying our repulsive machinery and maintained us in a state of equilibrium that might have had any one of half a dozen fantastic and unpleasant results for us. What had saved us, oddly enough, had been the rising—if so one could call it—of one of the denser of Jupiter's satellites, the moon Io.

ITS appearance from behind the bulk of its primary must have occurred some time previously, but apparently Yates did not notice it or rather did not take it into account as a possible factor in our favor until it became evident that it was exercising a slight if almost negligible influence on our magnetic instruments. Then came the wild idea to his mind of utilizing if possible any attraction Io possessed to pull us out of this mess. We were in such a balanced state that the slightest touch one way or the other must alter the situation for better or worse.

In a few hurried words Yates outlined his ideas to Waventry. All the repulsive forces of the ship were concentrated in that section directed towards Jupiter in general and the Red Spot in particular—purely localized, that is, leaving the part of the ship away from the planet free to be attracted by the gravitational pull of any body that happened to be about. In addition the *Icarus* possessed certain attractive machinery. Primarily designed to seize and hold any comparatively small object such as a fellow space-ship it was used occasionally to anchor the vessel on meteoric or asteroidal bodies so small that otherwise the ship itself would be in danger of drifting away.

Actually the direct opposite of the gravity screens, whose function was purely repulsive, the range of the attractors was limited and their influence local. Nevertheless Yates and Waventry both felt that with them turned on to Io there was just the odd chance of them supplying the necessary extra touch to swing the scales down in our favor. That was just what happened. The intense magnetic influences of the planet were reduced by just that hair's breadth sufficiency to enable us to escape from their clutch.

One immediate result of this, however, was that the moment the hold was broken we were hurled out towards Io itself, a scant 50,000 miles away, and only deft work on the part of Yates himself saved us from a collision with that body.*

"Then it means," I said at the end, "that for a long time to come—until something new in the repulsive line is invented—it will be impossible for the ordinary planetarian to land on or take off from Jupiter."

"Not exactly," Waventry corrected. "Providing the surface of the planet itself is in a stable enough condition and that one avoids the latitude of the Red Spot it can be done. But the antigravity apparatus will have to be capable of generating a greater repulsive force than is required for ordinary interplanetary conditions."

"I'm purely an astronomer," he went on, "but I must confess that the exact nature of the Red Spot intrigues me. Probably we shall never know exactly what it is until we devise some means of landing safely on the planet. For my part though I'd hazard the guess that it is composed, if not actually of a substance new to us, at least of a combination of known substances that gives us a result unprecedented in planetary geology."

"Something that you might call '*Jovinum*,' for instance," I suggested.

Rifflin smiled. "If future investigations show that it is a substance not included in our atomic table, that name would do as well as any," he said, "though"—his face lit up—"if that is the case it must have atomic number 123.**"

I chuckled. I could afford to now. "Well, anyway, that isn't getting on with the job," I remarked. "Our next trouble will be Saturn and its rings, and after that Neptune. Thank the gods of the airways that Uranus is out of the way at present heading round towards the other side of the Sun."

Rifflin looked soberly at me. "I fancy," he said, "we'd better give Planet 6 a wide berth. We're passing the frontier now, so to speak, and moving out into unexplored space, where no man of the Confederated Planets has ever ventured before."

Decidedly sobering thought!

CHAPTER VIII

On Neptune's Moon

I PLAYED for safety and gave Saturn and its rings the widest possible berth. Too much meteoric material flying about there, we considered, perhaps more than our repeller rays could deal with. Even far out in space, comparatively remote from the neighborhood of the ringed planet there was still sufficient of this cosmic wreckage spinning about to compel caution.

We breathed freer when once we were out of the danger zone. The rest now was plain sailing, merely a matter, save for the incalculable unforeseen, of holding straight on a direct course. The respite was a welcome one to me. It gave me the opportunity of relaxing my vigilance, allowed me to hand over a good deal of the work to others, and so become acquainted with the rest of the ship's company.

I had now been accepted as one of themselves, and I was informed that the Council had approved of me officially. Code messages had been passing between the Council representatives and the ship now for some time, reports of our progress, detailed accounts of our rescue and so on. Fontaine himself had been advised of his daughter's rescue,—that much we were told—but how he had taken it or whether his possible efforts to learn more had led to friction with the authorities or not we did not learn. If anything of the sort had occurred no word of it reached the ship. On that point Rifflin was quite definite, and I had no reason to believe that he was deliberately misleading us.

As a matter of fact I discovered later that he was telling the strict truth. The Council in their wisdom had decided it was better to leave us in the dark over the result of the message to Fontaine. Should trouble of any sort develop between the two parties our expedition would not find itself hampered by the chance of any repercussions of such a conflict. Myself, though, I could not imagine Jens Fontaine sitting down idly, while the Council doled him out such news as they felt inclined. It was not unlikely to my way of thinking that Paula's presence on board might yet be a source of interplanetary complications.

I sounded her cautiously. She knew little or nothing, I discovered, of her father's business commitments; the book of his ambitions was a sealed volume to her. I think she did not want to know very much. Most probably she had some inkling—I was almost certain of that—but considered a deliberate ignorance of the ruthlessness of his methods was far better for her peace of mind than unqualified knowledge. Jens Fontaine had fathered her; she bore his name, and perhaps there was a faint blending of his looks in hers, just as she could show on occasion a touch of that personality that had made him a force to be reckoned with. But beyond that I think she must have inherited an undue share of her ways from her mother. A gentle-souled, sweet-natured woman, as I have heard her described.

But Paula had made a favorite of herself amongst the ship's company by that act of hers of tending Adams in his last hours. Those who have not seen *seng*-sickness in its final stages would not understand what such a course involved; no amount of explanation could make it any plainer. Those who have some knowledge of the malady will know only too well what it was she had to face. Her father might threaten the very existence of the settled peace and order of three planets, but there was no one now on the *Icarus* who would as much as hold this against the girl.

We met often in the common room. Of our attitude to each other, what can I say? We had been drawn very close by the peril through which we had passed together; at times it had looked since as though the bond might yet be closer even than that. I had read a deeper meaning into her agitated words, something more than the comradeship accident and conflict shared together should bring. I hoped that it was so, with an odd fluctuating hope. Yet of late she seemed to have become a little more reserved. I wondered why.

It did not occur to me that I might have slipped a little too easily into the routine of ship-board, that perhaps unwittingly I had given evidence that she had receded to second place in my thoughts. But enough of that.

*Io, roughly 2,400 miles in diameter, revolves round its primary in about 42 hours at a distance of 260,000 miles.

**By the end of the 22nd Century the increase of intercourse between the Inner Planets, and the consequent discovery of many elements hitherto unknown on Earth had resulted in the extension of the atomic table to No. 123.

We were far out now almost on what in our grandfathers' day would have been the edge of the solar system, though now we know the numbered planets are twelve instead of our ancestors' nine. Speculation was rife as to what we would find. Some thought this and some thought that. Neptune was a dead world, lifeless and heatless, too far away from our father, the sun, to receive more than a minute fraction of his warmth. A dead world, perhaps rich in minerals some of them unknown to the Inner Planets—that was the most the projectors of the expedition hoped to find.

Some there were who maintained that it might be an abode of life, perhaps not life as we knew it, but still existence. These ones pointed out how even in the frozen areas of our own world life can go on; they instanced Alaska and the huge power transforming plants we have established at the coal-beds in Antarctica. Others—only a few though—had some wild idea of finding a world fair and smiling; they built up their hopes of this against all the deductions of our astrophysicists. One felt that they were lamentably mistaken, that when their error was discovered the disappointment would be all the greater.

I CAN'T say that I had built up any particular preconception at all. Events themselves would solve the problem. At the most I expected to see a world of blue-green ice. I at least knew enough of the conditions of interstellar space to be able to appreciate what lack of the sun's warmth could do.

Neptune grew out of the wild, increased in size with each cycle of twenty-four hours. And as we lessened the distance presently Triton, Neptune's satellite, became more clearly visible. A queer moon this, revolving backward, contrary to the accepted order of things. Another thing, too, that soon became plain was Neptune itself rotated backward on its axis. The three-centuries old supposition of Earth astronomers was at last confirmed. Waventry was jubilant at the discovery.

I imagined that we would descend somewhere on the cloud-wrapped surface of the primary, and I was wondering what orders would presently be sent me along from Rifflin, when the man himself arrived.

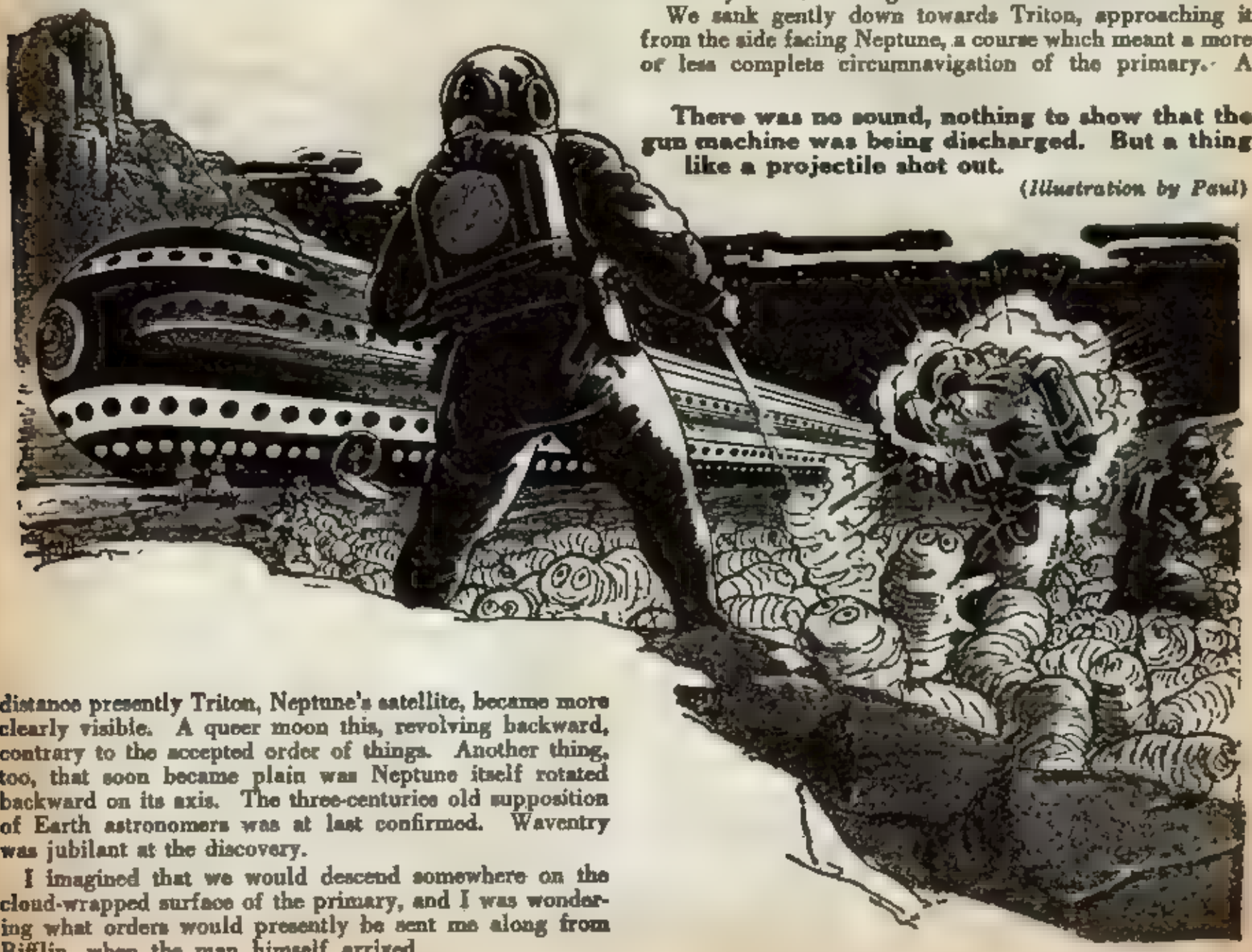
There had been a consultation, I learned, between the senior members of the expedition and Whitby, the representative on the ship of the Board of Control as the Interplanetary Council of Three is sometimes styled, and they had decided as the result of this to make the first landing on Triton, the moon, instead of on the planet Neptune itself. Possibly our experience with Jupiter's Red Spot had engendered caution in them, then again I think they did not want to be plunged too suddenly into the possibilities of conflict—supposing the planet was inhabited by intelligent beings—while we were all still stale from our long voyage in space.

Triton, only slightly larger than our own Luna, would provide an easy landing ground; a rest there would give us a breathing space, and in addition there was the chance of making some discoveries of value not unconnected with the major body itself. Triton, it was almost certain, had cooled far more rapidly than its primary; if its history had been anything like that of our Moon and it had once been inhabited, civilization must have developed rapidly and reached its peak while life on Neptune was still in the primitive stage.

Assuming that evolution had taken a somewhat similar form on each body life on Triton must have ceased to exist long, long ago. It was not unlikely, however, that sufficient traces of it would remain for us to gauge something of the conditions at present obtaining on Neptune.

A wise enough move I fancied, though it seemed to me most probable that any life there had ever been on either body had long been extinct. However, that was a matter that only direct investigation could decide.

We sank gently down towards Triton, approaching it from the side facing Neptune, a course which meant a more or less complete circumnavigation of the primary. A



There was no sound, nothing to show that the gun machine was being discharged. But a thing like a projectile shot out.

(Illustration by Paul)

dead world, that much was obvious on sight. A world held fast in frozen and eternal silence. Not so rugged as the Moon, it showed none of the staggering heights and stupendous depths of our satellite. It had worn smoother, or perhaps it had never known such geological vicissitudes.

We tested it for atmosphere. It had none. It was barren, bleak and airless, a derelict world.

"A case for space-suits," Rifflin announced over the general communicators. "Sorry, men, I'd hoped there was a chance of us being able to breathe natural air again, but that doesn't seem likely until we make Planet 8 itself. However, you'll have an opportunity of stretching your legs. That will be some relief at least."

We grounded on a long level patch, and rather to my surprise the bulk of the *Icarus* sank a little. The surface then was soft, not eternal ice, as we had imagined, frozen to the consistency of steel. It seemed rather odd, that. Indeed it looked as though something in the nature of a thaw was not unknown here, yet we could not see how that could be possible at such a distance from the center of the solar system, where the light and heat received must be but a fraction of that to which we were used on Earth.

A queer thing. Its implications were more intriguing still. The recognition of this made us more cautious than ever. For all we could say to the contrary we might have grounded on a body where the ordinary laws of Nature were in some instances inverted. Such things have been known to happen.

A duty watch was set, and the rest of us were given permission to don our space-suits, and pass out the air-locks on to the surface of Triton. Just as I was getting into my suit, Paula approached Rifflin and asked if she could come with us.

He hesitated. I don't think he liked the idea of a woman facing the unknown possibilities outside until they had been properly investigated by us men.

HER face fell at the signs of his indecision. I interposed.

"Let her come, Captain," I said. "I'll make myself responsible for her and see that she doesn't come to any harm."

"Oh, well"—grudging concession in his voice—"perhaps you'd better go with him then, Miss Fontaine. At any rate he'll take more care of you than anyone else would."

"Thank you," she said to Rifflin, flung me a questioning glance, and after a barely perceptible hesitation crossed to me.

"You don't mind?" she asked in a low voice.

"Mind? Of course not. Why should I?"

She stammered. "I thought . . . You seemed to be avoiding me . . . I can hardly explain . . . Becoming brusque . . ."

"I . . . !"

Came Rifflin's voice, cutting in on our dialogue. "Hurry up, there. We can't exhaust the air-locks until the landing party is all ready. The others are waiting . . ."

Hurriedly I helped her into her suit, adjusted the helmet and the air-tank, and fixed my own. We followed the others into the locks. The heavy doors closed behind us, the air in the locks was exhausted by the pumps. That done, the outer port was opened, and we stepped out onto the soil of Triton.

"Be careful," I said over the audiophone. "Don't make any sudden movement until we discover just how to adjust ourselves. Remember the gravity pull here is considerably less than what we're used to. Can't be much more than that on the Moon."

Indeed after the Earth-adjusted gravity conditions of the *Icarus* the feeling of lightness we experienced as we stepped out on this little world was very welcome. But we would have appreciated it more if there had been an atmosphere that would have allowed us to discard our helmets and the paraphernalia of air-tanks. There was little to be seen, so it seemed, and I doubted if this world had ever been inhabited at all. Even supposing that it had all life must have ceased to exist perhaps aons before man appeared on the Earth.

The members of our little party grouped themselves together with an instinct of caution. Paula, on coming out of the air-lock, had put her hand on my arm to steady herself. Now her hand slipped down and our fingers in the clumsy fabric of the gloves intertwined. Somehow it renewed the old feeling of intimacy between us.

Our orders were not to go out of sight of the *Icarus*, and we obeyed them without question. Still we were able to roam some considerable distance, and without anything definite being said by any member of the party we seemed to have selected as an objective the only prominent feature of the landscape in sight.

It might have been taken equally for an upthrust of the ice or a mound of unusual size, and on first appearances there seemed nothing very particular about it. But as we drew nearer we could see that it showed a certain regularity of outline that was intriguing in itself.

The ice that had formed on it undoubtedly hid the real shape of the configuration—hid, too, its exact nature. I imagine that it was purely out of idle curiosity that Whitby, the Council representative who was with us, drew his heat-ray tube and sent a beam licking round its base. The result was curious. The ice which formed its covering seemed to crack, melt and vanish almost in the one movement so to speak. Beneath was a squat object, roughly pyramidal in shape. It might have been twenty feet round the base; it was flat-topped rather like the Mexican *teocalli*, and it stood perhaps ten to fifteen feet high. It was made of some substance unknown to us, for it was neither any metal or stone with which we were acquainted. The chances were that it was some synthetic product.

For the moment we stood, staring incredulously. Whatever we had expected to find it was certainly nothing so well-preserved. Ruins of any sort would not have excited us so much.

"By the planets!"—it was Whitby's voice crackling in our audiophones—"here's something at least, the traces of a lost civilization, and either lost not so very long ago, or else it's in a remarkably good state of preservation."

As a matter of fact both his surmises were wrong.

Fired by the discovery, seized by a sort of archaeological zeal, the others began attacking the remaining ice of the pyramid with their heat-rays and soon the whole of the building, for such it must be called, was cleared of its covering and exposed to our view. Inscriptions—we took them to be something of the sort—covered the walls; whether they were meant to be pictorial representations or not we could not say. The chances were that they were of hieroglyphic origin, but that the ideographs had become so highly conventionalized as to be almost indecipherable to one unacquainted with them.

Whitby, however, pored over them, then turned and consulted with some of the others as to the possibility of photographing them. They decided that it was worth trying, and that the results would probably be worth it, so one of the men was sent back to the *Icarus* for a Blanx color, motion-picture machine, and enough light tubes to make up the deficiency of the sun's rays.

Our party had divided as a consequence of the find. Those archaeologically-minded were following the baseline of the pyramid round, examining each side in turn, the rest of us remained standing some distance back from the side from which we had first approached it.

I had let my gaze wander. No one, outside of Whitby and his little group, was paying much attention to the pyramid. Our interest was mostly divided between the progress of the man who was heading back to the *Icarus*, the possibilities the landscape presented, and the sight of Neptune itself now bulking largely in the sky. In the wan light it was a singularly conspicuous object.

Of a sudden Paula clutched my arm convulsively, and a startled exclamation tingled in my audiophones.

"What is it?" I asked.

She pointed. "Look . . . look at the base of the pyramid. There's a door or something. It looks as if it's opening."

The others must have heard her, too. Their audiophones would undoubtedly pick up her words. There was a general movement of amazement, of men whirling round and staring.

In a way she was right. A section of the pyramid on our side was undoubtedly moving, but not outwardly or inwardly on hinges like a door. It was slowly sliding down, revealing a black gap that momentarily widened. Curiously enough it reminded me of some queer animal starting to yawn.

CHAPTER IX

Wanton Destruction!

WHITBY and his colleagues appeared round the corner, saw our attitude of frozen astonishment, and stopped.

"What is it?" It was Whitby's voice, anxiously toned, vibrating in my ears.

I was the only officer with the group and I took it on myself to answer.

"I don't know," I replied. "But better be careful. A section of the pyramid seems to be sliding open. But we've seen nothing yet."

They made a little detour and came towards us at an angle, so that they could keep their eyes on the pyramid at the same time. I noticed Whitby carried his ray-tube in his hands, with his finger flickering round the button. His whole attitude was extremely cautious.

A black cavern, four feet square now, yawned at the base of the pyramid. The others joined us.

"What do you think it is?" I asked Whitby.

"I don't know. Can't say yet. We'll wait a little while . . . just in case. Nothing like being careful. But I wouldn't be surprised if we'd touched some hidden spring somewhere. Perhaps the whole thing is a monument built by some vanished race, a museum, a record of their civilization made when they knew they were doomed to extinction, designed with the idea that somebody might come later—perhaps thousands of years afterwards—someone like ourselves, and benefit by the knowledge they had acquired."

I thought that not unlikely. Paula, I could sense, thought other things. The way she held to me, her fingers gripping my hand, showed a vague fear of unknown possibilities lurked in her mind.

"Well, we've waited quite a while," said Whitby presently. Doesn't seem as if anything's going to happen. I vote to investigate."

There was a general movement forward at that, but he stayed it with an abrupt word.

"No, not all of you. There's still a chance of something there that we don't understand. Only a few of us, two or three at the outside, had better go forward. I'm one, and I'll take a volunteer or two."

I stepped forward. Paula made an abrupt movement as though to detain me, then seemed to think better of it.

"You, Grayne. Good. Alright, Yates. That will do. All armed? Well, we'll go forward now. One of you others better try to get the ship—your audiophone range should carry that far—and tell Rifflin what's happened. Come on now."

We three went forward. I felt disappointed. There was nothing of interest to be found so far. No doubt the black square that had appeared in the pyramid was due to the operation of some spring we had inadvertently touched; again just as probably some age-old fracture, extended by the action of the heat-ray, had resulted in the section giving way and sliding down into the hollow interior of the erection. For my part I did not anticipate any startling or valuable discoveries as the result of this.

Cautiously we explored the opening. Nothing much there. Only when we thrust a light ray inside and jetted the beam about we found that instead of there being a sheer drop as we had expected straight into darkness we were looking down an inclined run-way. The walls and floor were lined with some translucent white substance not set like tiles, but apparently laid down in some continuous piece. It stretched away downward in a gentle slope until it passed beyond the range of our beams.

Whitby hesitated. "I wonder," he said, "whether we'd better venture in or wait until we hear from Rifflin and get some more equipment."

"Better wait perhaps," someone else suggested. "We'll want lights at any rate."

It was just as well for all of us that we did wait. I cannot say who first of all noticed that anything was wrong. Probably several of us did so simultaneously. There came a sudden excited cry from someone; we seemed pushed violently back, then the tunnel and the black square vomited forth the oddest, most repulsive things that perhaps it has ever been the lot of man to encounter.

Imagine things like giant, soft white slugs, things with great round, saucer-like eyes, from the body pseudopods branching out and retracting in all directions, suddenly hurling themselves upwards at us like the contents of a belching volcano.

The loathsome things, four to six feet in length, went over us like a wave, bearing us to the ground. Even through the fabric of my space-suit I could feel the chill of the horrible, white bodies, and a sickening feeling of horror and disgust swept over me. My ray-tube was in my hand, my finger on the button. The beam hit the thing above me, and of a sudden it shrivelled and melted away as ice melts in the sun.

Then as I tried to struggle to my feet I saw that literally thousands of them were pouring out of the opening. Another wave caught me, and bore me backwards to the ground, knocking the ray-tube out of my hand, so that I was left helpless. To top it all off the contact with the bodies of the white things had slimed over the glassite front of my helmet, blacking out from my sight all that was going on about me.

THERE followed a series of confused impressions. Cold bodies, seemingly without form or substance, passed and repassed across me. Things tore at the fabric of my space-suit, and blows were given on my helmet. What saved me from the hellish monsters I cannot say unless it was the press of their own bodies above and about me.

Abruptly there came a clear space in the conflict, and someone caught me by one arm and someone by the other, and between them I was jerked to my feet.

"Wipe his plate," said a voice. "He can't see. It's covered with something."

"He's not hurt? You aren't injured, are you, Phil?"

"No, not hurt, only knocked about and blinded by this stuff over my helmet. But you, Paula, what do you mean by being here? You should have kept out of it."

"I couldn't. I saw you fall . . . knocked over . . . and I rushed in."

"Pulled you out from under the things," said the other voice—I recognized it now as that of Yates—"after burning through to you with her ray. But, quick, the trouble's not over yet by a long sight."

They got my helmet clear again, so that I was able to see, gave me a spare ray-tube in place of that of mine which I had lost, and dragged me to one side out of the press. I found I was able to see clearly now.

The white things were swarming over the whole visible surface of the moon. Our heat-rays, effective enough against them individually, seemed able to do nothing towards reducing their numbers. As fast as we mowed them down and dissolved them a dozen others seemed to take the places of the fallen. They were still pouring in their hordes out of the opening in the pyramid. It looked as though they might swamp us yet by sheer weight of numbers.

Yet I could not see what damage they were likely to do to us otherwise. The pseudopods they put forth might serve them in lieu of hands, but they could not rip and tear like claws or fangs. But we were soon to learn we were dealing—not as we fancied with strange sub-human creatures—but with intelligences quite as good as ours, though of a different order.

Of a sudden the press of advancing bodies about the pyramid opening slackened, it parted, and the whole pyramid itself swivelled round on its base. The movement of the building revealed a strange mechanism. It consisted of a short stubby and extremely thick central tube set on a tripod. Gathered round the center tube was a surprising number of smaller tubes. The whole effect was not unlike the ancient machine-guns that one still can see in the Museums of Earth, relics of the days when Earthmen fought with and killed their fellow Earthmen.

The rest followed so quickly that it was over before we quite realized what was happening. There was no sound, nothing to show that the gun machine was being discharged, but a thing like a projectile shot out the central tube. It travelled fast enough, yet the eye could follow its course without difficulty. It hit the ground in front of a group of our men who were struggling with the white things,

burst, and a nimbus of some barely visible vapor seemed to hover about them.

"Some kind of poison gas," I surmised. Then we were dealing with intelligent beings, ones able to kill scientifically, and well.

A splinter from the projectile when it burst flashed up, and struck one of our men a glancing blow. There was just force enough behind it to smash the glassite pane of his helmet. He staggered and we looked to see him fall as the air from his tanks rushed out the vent. But he did nothing of the sort. Instead he seemed in nowise the worse for the experience, when by all the rules of the game he should have been dead by this. Maybe there was some sort of explanation in the nimbus of vapor just barely visible that hovered round him.

More projectiles fell. The creatures' aim seemed to be not so much to hit us with them as ensure that they burst in our midst. Yet they did little or no harm. The one appalling casualty was when one man was hit squarely, and the missile almost cut him in two. More and more of the things were going down under our rays. They were retreating out of the area where the shells were falling, but there were some that could not retreat. They had left a goodly number of their comrades behind.

Many of those left, particularly in the area where the shells had burst, were writhing on the ground, thrashing about as though in mortal agony, yet one of our fellows was standing in the same circle, his helmet in his hand while he made some adjustments to his audiophones. Another man had the glassite pane of his helmet broken and he was laughing, actually laughing. Yet by all the laws of physics he and his comrade should have been dead men. It was a direct reversal of the laws of Nature, men standing without protective insulation, breathing in the airless void!

A voice crackled in our audiophones. "Back to the ship, all of you. We're taking off. Don't delay. We can't say what weapons they have that they haven't used yet."

It was Rifflin calling from the ship. At the word the retreat began. The things followed as soon as they saw what we were doing, and the gun machine advanced with them. Seemingly it was propelled by some sort of motor, and moved on flexible runners in a manner oddly suggestive of the progress of a worm. Another machine, made of the same material as the pyramid, was being hoisted up through the opening. Certain parts of it, looking like circular saws, were revolving rapidly. I did not like the look of it.

Apparently it could move forward without any controlling intelligence in charge, for it came on towards us at a fearful rate, leaving the milling white things behind. It drove through those dying on the ground, cutting them up into white fragments, and headed straight for us. Forgetful of the lighter gravity pull of this peculiar world we broke into a run, covering the ground with great leaps. Paula and I, hand in hand, ran side by side.

We reached the open door of the air-lock, it was sealed behind us, and at the same moment the ship lifted from the ground. We passed into the inner chamber once the air was admitted, and there changed from our spacesuits.

The *Icarus* had not risen far from the ground, just high enough to be out of the range of the things' weapons. They were such fearfully loathsome creatures, and the attack launched against us had been so utterly unprovoked that Rifflin, incensed by the sight of our one casualty—the poor fellow, already dead, had been sliced to pieces by the travelling saw machine—turned the full power of the ship's rays on the pyramid and those about it.

"It's destroying a monument of some archaeological interests," he said half in explanation, half in apology for his action, "but at the same time it's ridding the universe of a good many singularly unlovable creatures."

Five minutes later where the pyramid had stood, there was a desert waste. Myself, I prefer to pass no opinion on the action; it is not for me either to condemn or condone what Rifflin did. The Council, however, I know took an extremer view of what he did; he was temporarily disrated on his return for it, and Whitby, I believe, was hauled over the coals for lending it his sanction. Such things as happened in a hand-to-hand conflict were admissible, but the razing of the pyramid and the consequent killing of a myriad of the white things were regarded by the Council as wanton destruction. So much for that.

We circled round the scene of the affray for some time, then seeing there was no further sign of the creatures and their exit seemed sealed forever, the ship settled back on the ground, not so close this time to the site of the pyramid. A strict watch was set, and all those of us who had been in the party were asked to come to the common room, and those of us who had had any experience out of the ordinary were asked to relate it.

Interest naturally centered round the man who had had the glassite front of his helmet shattered, and yet who had not died from want of air.

"Air," he said. "There was lots of it, all around. It was heavier and denser than the air of Earth, and there was something in it that I can't name, a sort of sweet-tasting gas, but it was quite breathable."

"But," someone objected, "we tested for air before we landed and found the place was totally devoid of atmosphere."

Whitby interposed. "The other two support Hove's experiences," he said. "They, too, breathed the air, and found it not lethal. I've a theory, Captain, and I fancy our astrophysicists will support me in it when they've investigated the facts. These things—Tritonians, let us call them—live in an airless world. We know that. They do not need air to support life. Why I don't know. It seems an inversion of the laws of Nature, but it's a fact and we've got to accept it as such.

"That being so, it seems that air is no doubt poisonous to them. They're something like fish on Earth in that respect, who live in water and die when they are left in the open air away from it. Those projectiles they fired at us contained the deadliest poison gas they knew, synthetic air! They could not know it was our natural medium. They only reasoned from its effect on them, and you all saw how those who were caught in it died in agony. That's my theory. Though I say it myself it's a singularly good one. All the facts that we observed agree to prove it."

And that, indeed, seemed to be all that there was to it.

"Well, we're in for a fine time," Rifflin commented at the end, "if we're going to strike the same sort of things, proportioned in the size of their planet, on the primary itself."

He strode to one of the observation ports, and pressed the button that would draw the marsonite shutters back from the glassite windows, and stared out towards Neptune, a quarter of a million miles away. We could all see the great planet without any craning of our necks, and I think we were all a little afraid of what we might encounter there.

Whitby summed up the situation. "Well, we've got to go there and investigate whether we like it or not," he said. "We're under orders from the Council and we can't leave with our work undone."

For a time no one said anything. Then someone remarked that the ship seemed to be rather on the warmish

side. The same idea seemed to have struck us all, but oddly enough the feeling passed almost as quickly as it had come.

We were still standing there a moment or so later when there came a great flash of light, and the atmosphere of the ship heated up again a couple of degrees.

"Did you see that flash, you two?" Rifflin asked.

He turned to Yates and myself, who were standing just behind him. I answered.

"Yes," I said, "I did. And what's more it appeared to come from Neptune itself."

"What would you think it meant?" said Whitby, craning forward, though the flash had disappeared of the instant.

"I don't know," said Rifflin very soberly. "It's hardly volcanic in origin, of that much I'm sure. The only alternative is to presume the existence on Neptune of intelligent beings who have become aware of our projected visit, and are already making arrangements for our reception."

No one said anything to that, though the thought crossed my mind that if Rifflin's idea turned out to be correct we were in for a very warm welcome indeed.

CHAPTER X

A Strange World

THE sudden rise in temperature of the atmosphere of the *Icarus*, and the flash of that great ray explained at least in part that softened quality of the frozen soil that had puzzled us on our landing. What still remained to be solved was the nature of the beam itself. That it had been a heat-ray of some sort was evident, yet it apparently possessed none of the lethal qualities of our own rays, otherwise we would almost certainly have been instantly annihilated. Nevertheless the fact that we were not was not to be taken as establishing a precedent.

We lifted easily from Triton's surface, raised by our gravity screens, then our rocket engines began to function and presently we were hurtling across the gulf of a quarter of a million miles that separated us from Neptune. But now we were all in a different frame of mind from that which had been ours at the outset. Then, with little or no idea of what lay before us, we could face the unknown with comparative equanimity.

If we had speculated at all about the types of life we might encounter, we had unconsciously pictured them as following the lines of evolution familiar to the Inner Planets. It is difficult for a man to imagine an utterly new concept, almost impossible to picture that of which he or his kind have never had experience.

But now something had happened to jolt us out of the groove. On Triton we had discovered a form of life at once intelligent and loathsome, existing in conditions that would be fatal to us, regarding as deadly conditions that were vital to our existence. This inversion of what seemed to us the natural order of things colored our imaginations and tinged our minds with the fear of possibilities. Who could say now what monstrosities, things utterly alien to all our ideas, it might be our lot to face on Neptune?

We saw no more of the flashing beam as we crossed the gulf between moon and planet. Had it not been for the way in which the atmosphere of the ship had heated for the moment, and the eternal ice outside on Triton's surface softened under the influence, we would have felt convinced that what we had seen had been some optical illusion. But the existence of the beam was confirmed in so many ways that we could not put it down to anything of the sort.

The greater part of Neptune was hidden from our sight by banded clouds, not unlike those on Jupiter, that streaked the visible portion of its daylight surface. The rest of course was in darkness, and because of the clouds our instruments were unable to detect anything that would indicate there was life on the planet.

Rifflin was acting very cautiously now. We could have flung the *Icarus* across the intervening void in a relatively short space of time had we chosen, but for once our captain decided we had better go slowly and carefully. Indeed I am pretty certain that he had made up his mind not to effect a landing at all if the planet was inhabited and the inhabitants showed any sign of hostility.

So it was that we took the better part of twenty-four hours to do the distance to the night side of Neptune. Our tests showed a breathable atmosphere, slightly different in constituents from that of Earth, though there was nothing in it that would be in the least harmful to our Tellurian organisms.

We maneuvered slowly through the cloud ceiling, our engines silent, for we had no wish to bring trouble flying about our ears, and maintained our equilibrium by manipulating our gravity plates. We were there to spy out the situation before deciding on the wisdom or otherwise of landing.

The night was far darker than anything we had ever experienced on Earth, a darkness intensified by the thick blanket of clouds above us, and because of that our telescopic instruments were almost useless. We did indeed see occasionally something that resembled a patch of light, but it came and went so swiftly that we could not say with any degree of certainty that we had seen it at all.

We looked for cities of some sort, lines of lights such as would come from a collection of buildings occupied by civilized beings, but looked in vain. Occasionally we made out configurations that might have been buildings, though in the absence of a reasonably good visibility they might just as well have been low hills. As a matter of fact the general opinion, recollecting those evanescent patches we thought might have been lights, was that they were probably ice hummocks.

With our speed tuned to that of the rotation of the globe we remained until the day broke, a bleak, watery dawn, dim light filtering through breaks in the clouds. Neptune, 2,800,000,000 miles from the center of the solar system gets but little light from the sun, and it was the knowledge of that more than anything that made us feel the planet was probably as far gone in the grip of ice as its satellite, Triton. A natural conclusion, but a wrong one. How wrong we were to learn much sooner than we expected.

As the dawn broke, cold and cheerless, we crowded to the observation windows for this, our first glimpse of a new world. And almost with the one accord we cried out in astonishment at the sight that lay before our eyes.

CONSPICUOUS only by their absence were the unending stretches of blue-green ice we had imagined. Instead on every hand were green and smiling fields, laid out checker-board fashion, with here and there a sparkling stream meandering across the prospect. Scattered at irregular intervals were groups of buildings, glistening things of domes and cupolas, gleaming frostily. They seemed as though made of ice, though probably it was glassite or some similar vitreous substance.

The light, too, seemed of a sudden to have grown brighter, stronger than it had any right to be, seeing our distance from the sun. The clouds had parted and a golden glory was settling over the face of the countryside. While we stared, wondering how this could possibly be, we saw what perhaps we had overlooked before. Set at

intervals about the countryside were great many-faceted concave mirrors. At least that was what they looked like to us. Each was set on a vast straddle of lattice-like girders, and each, from the slight movements we saw as we watched, seemed capable of sweeping the full circumference of the sky.

But that was not all. Between each pair of mirrors was another lattice-structure, bearing at its top a great, glowing golden ball, a thing so huge and so brilliant that its size stunned us and the upthrust of its rays almost blinded us.

"Artificial suns," said someone in an awed tone. "They've solved the secret of atomic energy!"

One of our astrophysicists standing by heard the remark and slowly shook his crabbed head.

"Nothing of the sort," he said sharply. "They've got a solar power plant. Of course it's marvelous. I'd like to know how they develop so much power with it. Nevertheless the principle of it is very simple. We've known of it for centuries on Earth, but we've never been able to utilize it with any degree of success. I wonder if we can learn the secret of it from these people."

"It depends," said Whitby pointedly, "on just what kind of people they are. By the way, why are those rays pointing upwards?"

The other looked up sharply. "For two reasons I should imagine," he said calmly. "One, they seem in some fashion to make a rift in the clouds and allow the feeble rays of the real sun to get through to the collecting mirrors, and, two, they are thereby reflected from the remaining blanket of clouds, possibly with the idea of diffusing them more.

"The whole thing moves in a sort of circle, you see. The energy collected is used to break up masses of cloud to allow of the collecting of yet more energy. Why do I think the rays are diffused? Well, they point up instead of down, and again from what we can see of them I should think their effect applied direct to the countryside would be—er—too considerable."

Whitby whistled. "Of course," he said, "that explains what happened on Triton, the heat we felt and so on. But"—he wrinkled his brow—"Triton's behind Neptune on the dark side. That seems to present a difficulty."

"It doesn't," the astrophysicist answered. "Triton's orbit is so slanted towards the plane of the ecliptic that though it is behind its primary, it is never entirely hidden by it. The interposition of Neptune's atmosphere, however, may make it invisible from Earth at times. But part of it occasionally must be facing the sunward side of Neptune. We were on that particular section of it, and no doubt it was a ray from one of those things"—he indicated the glowing artificial suns with a sweep of his arm—"that touched us in the passing."

"But imagine the power of it," said Whitby thoughtfully, "when it could heat us up after passing through a quarter of a million miles of space."

The other smiled. "The rays of the sun itself have to pass many times that distance before they reach Earth," he said dryly, "yet even there they are strong enough to melt ice. Each of these contrivances is a miniature sun, effective over a proportionately limited extent of space. That, at least, is my reading of it. I may be hopelessly wrong. Remember we are dealing here with conditions that seem to run counter to what we expected to find. The difference may be merely superficial. On the other hand there may be an entirely different explanation to everything we've seen."

"There don't seem to be any people—life of any sort—about that I can see," Rifflin remarked. "That, the intelligences of this planet, is my concern. Until we know what *they* are we can do little or nothing."

"At any rate," I cut in, "I shouldn't think they could fly. We must be perfectly visible from ground level now, and the least we could expect, if they had air machines of any sort, is that one would come up to investigate us. I haven't seen any birds about, either, though I've been looking for them. Perhaps flight, natural or mechanical, is utterly unknown on this planet."

Rifflin nodded. "There seems to be something in that," he agreed. "One can't imagine the principles of flight being discovered on a pedestrian world."

He turned to Whitby. "What should we do, do you think?" he asked. "For my part I'm against landing until we see what sort of creatures we have to face."

Whitby considered. "I see your point," he admitted, "but it seems to me that we must land sooner or later. Either they haven't seen us, which I can hardly believe, or else they're keeping out of sight until they discover exactly what our intentions are. Try and put yourself in their places for the moment. They know nothing about us. We—and the *Icarus*, for that matter—may be something utterly alien and incomprehensible to them. They may regard us as some strange diabolical menace.

"You see the position in which we are placed. We've come here on a friendly mission, but I can't think of any medium of communication other than direct contact by which we can convince them of that. Even the fairly universal language of signs mightn't work in this instance."

Rifflin shrugged his shoulders. "After all I'm only the commander of this ship," he said with a touch of sharpness in his tones, "but one or two things seem pretty plain to me. For a start I think we're wasting time in a sort of academic discussion of possibilities that for all we can say might be utterly non-existent. I've got a practical suggestion to make, and you can do with it as you please."

"Go on," said Whitby, with a faint smile. "We'd like to hear it."

"It's this," said Rifflin. "We seem to be over an agricultural district. Quite probably we're dealing with, comparatively speaking, an uneducated and superstitious population. You don't usually find a farm-hand anywhere with a knowledge of exact sciences. If he had he wouldn't be there. It's in the cities we'll have to look for intelligences competent to understand us. Therefore I vote that we search for something in the nature of a city."

"Those buildings?" said Whitby indicating the glistening, glass-like structures.

"Hardly, unless the population is far smaller than the size of the planet would suggest. I'd look for something on a larger scale than that."

"Well, your suggestion seems to be about the best thing yet," Whitby conceded. "If we cruise slowly across the planet we're bound to strike something sooner or later."

"Along the plane of the equator," Rifflin added. "It's in the tropics of this planet that we're most likely to find anything, I'd imagine. Also, if we use the engines they'll draw attention to us. I don't fancy the gravity plates in atmosphere. They're altogether too tricky to maneuver for any length of time under unknown conditions."

"Go ahead then," Whitby told him. "I'll take the responsibility before the Council for anything you do."

A few minutes later we were cruising slowly a few hundred feet up, while the surface of the planet slowly opened out to our view. We throttled the engines down as much as possible, nevertheless they kicked up sufficient row to draw to us the attention of any intelligences with an auditory range in the same scale as ours. Myself, I had nothing to do now. My work ceased with our entry

into atmosphere, and the control was solely in the hands of Yates. So I had leisure to look about me. I improved the opportunity by seeking out Paula, of whom I had seen little of late. Indeed I had not had the chance of exchanging two words with her since we returned to the ship after our encounter with the great white things on Triton.

After some search I found her at the end of one of the corridors, staring out the observation port placed there.

She turned at the sound of my voice. I could not say from her expression whether she was pleased to see me or not.

"Oh, it's you," she said. "I've been wondering what had become of you."

"I had work to do," I answered. "I could not get away."

She looked at me oddly. "Would you, if you could?" she asked after a moment's pause.

I nodded. "Yes."

She did not comment on that, but directed her gaze out the window again.

Some spring inside me seemed to release. "Paula," I said. I came a little closer.

"Yes, what is it?" She did not turn.

"Shortly," I said, "we'll be landing on the surface of a totally unknown world. The stars know what we may find, things perhaps worse than on Triton. It might well be that we will have to face conditions utterly beyond our experience. That being so . . . "

I stopped abruptly.

"Go on," she said softly, encouragingly. But still she did not turn.

"Paula," I said with a rush of words, "can there ever be anything between the daughter of Jens Fontaine, and the mere navigator of an interplanetary liner—one who, moreover, may find it hard again to get a ship?"

"I should think," she answered calmly, "that that would depend on the navigator himself. Should he consider the girl beneath him, believe that she is tarred with the same brush as another member of her family I should say, 'No.' But should he not feel inclined to hold against her the business sins of her father there may be another answer. So much depends upon the courage of the man."

For the moment I fancied there was an under-current of sarcasm in her words.

I took one step forward, caught her by the arms, and whirled her round, drew her to me and kissed her.

"Why," she said a little breathlessly, "didn't you do that before?"

"Because," I said. Then I realized how inadequate any explanation would seem now. "What does it matter now, anyway?" I asked.

"No, it doesn't matter," she said with soft voice and shining eyes.

She turned away, I think to hide her face, and looked for a long moment out the observation port. It was very quiet in the corridor. No one was about there. I moved the closer to her.

Of a sudden she started, and clutched convulsively at my arm.

"Look," she cried excitedly. "Look there." With her free hand she pointed to the surface of the planet below us.

I peered over her shoulder in the direction she had indicated.

It was then we saw the first Neptunian.

CHAPTER XI

Neptunian Life

FOR some time we stood aghast, totally unable to decide whether the thing we saw was bird or mammal. It must have been at least fifteen feet tall, and it stood on stilt-like legs like a crane or a stork. The body, more dome-shaped than oval with the flat side underneath, seemed small in comparison with the length of the legs. From either side of the body stretched out something that from the distance at which we were looked like arms. At one end of the body were two big bulbous looking things that we took to be eyes. In color the whole of it was of a shade of green that could blend quite readily with the green of the fields.

At the moment we had first become aware of it, the thing was standing in an untilled field, the green of its body showing against the brown of the bare soil. Something in its very stand suggested an attitude of intelligent contemplation.

But even as we watched it seemed to realize that something new and strange had come on the scene. Perhaps the drone of our engines had just become audible to it. The weird body tilted sideways, so that one of the eye-like protuberances was slightly higher than the other. It was for all the world like a man shutting one eye against the glare of the sun in order to squint up at something in the sky.

The scrutiny lasted only an instant. Then with quick strides of its long legs it set off towards the nearest green fields, as though to seek cover. No doubt it had been borne in on it in the glance it cast at us that it must be perfectly visible against the brown background of the bare soil. But once it reached the green field the legs folded up underneath it, the dome-shaped body sank into the grass, the eyes seeming to hood over as it did so, and in less time than it takes to tell it had merged so completely into its surroundings that it was invisible at a casual glance. Only an inequality of the grass remained to show where it was.

The others must have seen it too, for the buzzers began to sound the assembly throughout the ship, and the *Icarus* started the long spiralling that meant she was preparing to land.

We made our way to the common-room. Others of the company, roused by the summons, were on the way there, too.

No sooner were we assembled than Rifflin addressed us. What he had to say was fairly brief. He began by assuming that most of us had seen the thing in the field; for the benefit of those who had not he described the creatures and for the first time I learnt that others, too, had been seen in the distance. We were landing immediately to investigate and, if possible, establish some sort of contact with this first specimen of Neptunian life. Its actions appeared to be those of an intelligent being, though whether it was the dominant form of intelligence on the planet remained to be seen.

A landing party would leave the ship. With the exception of certain members such as Whitby whose right to go was unquestioned the rest would be selected from volunteers.

At the call I promptly stepped forward, and probably because she was standing beside me Paula incontinently followed my example. Rifflin said nothing, though he stared at us a little dubiously. I fancied myself that he did not like at first thought the idea of his navigator running himself into possible danger. On the other hand he may have objected to Paula being of the party. How-

ever, whatever he thought did not matter much as long as he did not forbid us to land.

Several others stepped forward, amongst them Yates. But Rifflin motioned him back.

"You're wanted here," he said, "in case we have to take off in a hurry. For the same reason none of the engineer staff or the ray gun crews can come. If all goes well, your turn will be later."

I had expected some murmuring at that, but there was none. Several members of the party stepped promptly out of the ranks to the back of the room. An explanation of the readiness with which they obeyed orders might be found in the fact that a good many of them had had training in the Interplanetary Guard's service.

Again Rifflin seemed inclined to hesitate about us. "I don't know that I should let you go, Grayne," he said dubiously. "Have you any special qualifications that might be of use to a landing party?"

It was my turn to hesitate. I had a long shot at it, for I dearly wished to go with the party.

"It seems to me," I said, "that it's the duty of a navigating officer to learn all he can about a new planet. If a regular service is going to be established to here any data I acquire may be invaluable."

Rifflin laughed. I've no doubt he saw at once the fallacy of my argument.

"Alright, you can come," he said, and shifted his eyes inquiringly to Paula.

"And you?" he asked.

SHE looked him straight in the eyes. "It may be my only chance of ever landing here," she answered. "Call it curiosity, if you like, but I'd dearly like to see what Neptune looks like from the ground. And if it comes to being useful, well I suppose I can do a man's work if necessary. If we unfortunately have to fight, that is," she added.

Rifflin's face clouded. He said, loud enough for us all to hear, "There is to be no conflict if we can possibly avoid it, you all understand that. We exceeded instructions on Triton, and there will be trouble over that on our return. I prefer not to have a repetition of anything of the sort here.

"You'll all be armed, of course, and the ship's rays will cover us if necessary. But in the event of anything going wrong no man is to take the initiative into his own hands. If there's fighting to be done, I'll give the signal as I'll have to take responsibility later for my action. Understand that now. I don't want to have to repeat it, or be told afterwards that what I said wasn't made clear enough."

Meanwhile the *Icarus* had grounded. Fearful of offending local susceptibilities from the start we landed in the bare patch where we had first seen the queer being. At least there was less chance of us doing harm there than if we landed in a crop.

The air of the planet, very welcome after the close confinement of the ship, was not quite all we expected it to be. It gave us a feeling of lassitude, and made me think that this was a climate where a race would very soon become indolent. The gravity pull affected us little if at all; it was not perceptibly different from that of Earth. That, of course, had long been known and allowed for, under the principle of the "square law."*

We had no difficulty in locating from the ground the field where the creature had gone to earth. It seemed to have given up all attempt at concealment now, and the big goggle eyes watched us, as we approached, with a stony lack of concern. It looked as though it simply intended remaining immovable until we reached it. What it would do then remained to be seen.

Remote in the distance we could see other similar creatures. They, however, were striding towards us at a pace that bade fair to bring them up pretty soon. Presently the eerie silence of this strange world—for so far we had heard no sound other than we had made ourselves—was shattered by a siren-like noise that drifted up to us, coming apparently from the distant group of creatures. At the sound the thing in the field answered on a lower note. And, as if the whole were some agreed-on signal, it hauled itself leisurely to its feet.

When we saw it thus we realised that it was larger than we had thought when viewing it from the ship. All the effect of the foreshortening was lost, and we found we were looking up at a creature that towered massively over us. The eye swung round, fixed us an instant, then it gave another weird screech, and came trundling to meet us. Its movements were clumsy, so much so that we ruled out all thought of possible hostile intentions.

While it was still some distance away Rifflin stopped abruptly, flung up his binoculars, focused them on the creature, and then said something under his breath. He handed them to Whitby without a word.

Whitby fixed the sights on the lumbering creature, and stared long and intently. At last he lowered the glasses with an expression of puzzlement on his face, and said something in a low voice to Rifflin. I would have liked to have known what it was, but unfortunately I was not close enough to hear.

However, the creature was near enough to us now for it to be seen in greater detail. It was oddly bird-like and yet there were essential points of difference. The body was covered with something that I took to be feathers, and now that it was moving a sort of irridescence played rhythmically across them. There were no wings, not even the rudiments of them. Neither was there a tail or anything remotely resembling head or neck. Probably the brain and all other functions that we usually find in the head in the case of bipeds and quadrupeds, indeed most forms of life on Earth, were enclosed in the body case just underneath the eyes. The hand-like projections, which now I came to think of it, might well have evolved from the wings, dangled idly as it moved.

As it drew nearer we became aware of a faint sound that can only be described as a sort of continuous "cluck-cluck-cluck," that, if anything, further heightened the bird-like resemblance. Had the present-day inhabitants of Neptune then evolved from huge birds, incapable of flight? If that was so, it might explain the utter absence from the surface of the planet, as far as we were in a position to judge, of all other forms of bird life.

But, as a matter of fact, all the theories I had formed were shattered in the completest possible fashion in a very few minutes after they had suggested themselves to me.

THE creature came to a halt within a yard or so of us—at its near approach we had halted to await its next move—the great legs bent up under it, and with an awkward swaying of the body it settled itself down and squatted in front of us. There came a clanging sound on the heels of that, portion of the body-case slid round, revealing a circular opening, then the truth dawned on us all, though I fancied that Rifflin and Whitby had known—or guessed—it from the moment they had viewed the creature through their glasses.

It was no intelligent form of life in itself with which we

*The "square law," i.e., the gravity of a planetary body can be found by dividing its mass, taking that of Earth as a unit, by the square of the number of times its radius is greater or less than that of Earth. A body with a mass four times that of Earth, and a radius twice Earth's would be of equal gravity pull, i.e., 4 divided by 2 squared.

were confronted. It was merely a mechanically-propelled vehicle of some sort. The real inhabitants of Neptune were even now emerging from the door in the body-case.

There were three of them: short, stocky little people, of an average of four feet in height. In form they were human, though there were little differences of detail that did not become apparent at first, little odd suggestions that it took us long to track to their source.

Each of the three wore some sort of glasses, dark things that hid their eyes from us, and added a little to the weird effect—more mental than anything else—that their presence had on us. Of course with their glasses hiding their eyes, a good deal of any possible expression of emotion was lost to us. It was impossible to say with any degree of certainty what they thought of us, though from the fact that the visible portions of their faces remained absolutely immovable it seemed that our advent had occasioned neither surprise nor resentment.

They stood there stolidly regarding us, just out of hand's reach, apparently waiting for us to take the initiative. And almost immediately it seemed to me that the situation must resolve itself into a problem of communication. By what means were we going to convey to them something about ourselves, our intentions and our hopes?

Whitby stepped forward, tapped himself on the breast and said "Earthman," as slowly and distinctly as possible.

One of the Neptunians stirred, and made some sort of reply the very sound of which was absolutely unintelligible to us. Yet there must be some means of reaching a basis of common thought. They were reasoning and intelligent beings; they possessed apparently a civilization of sorts, and they had shown the ability to construct and operate intricate machines. Yet the sounds they uttered seemed to offer us no point of contact.

They were not even the sort of sounds we had learned to expect from beings resembling humanity. I myself was at a loss to describe just exactly what they reminded me of, though in a vague way I had a feeling I had heard something like them before. There was just that odd elusive familiarity about them.

It was Paula who solved the problem.

"Why," she said in an excited whisper, "it's just as though they were purring. Cats purring."

I looked again, this time more intently, at the stocky little figures. Was it her suggestion or did I really now see something feline about them, that odd unhuman cast that had already awakened a query in my mind?

I caught my breath, gasped . . .

"Rifflin," I cried, "Miss Fontaine has suggested—see if you think there's anything in it—that they're purring—like cats, that there's a likelihood they may have evolved from some feline form."

He looked startled for the moment. It was too odd an idea for him to assimilate all at once. They looked so human, and yet there was that queer suggestion about them.

"By the planets"—it was Whitby, explosively—"there may be something in that, Grayne. No bird-life here, so far as we've seen; the only mechanically-propelled vehicle we've yet struck made in the form of a bird. One the natural enemy of the other, the bird and the cat. Yet if that's so, they've evolved a long way. The relationship is hardly noticeable . . . until you hear them speak."

Our little discussion appeared to have aroused some interest among the Neptunians, for the one who had spoken previously said something to us. This time the odd purring note was more marked. I guessed he was asking a question.

"We'll have to handle them somehow," Rifflin said to Whitby. "Make friends with them first. After that we'll be able to establish communication without much difficulty . . . I hope. But first we must make them understand that we mean them no harm."

"I'll try." Whitby took a pad of paper and a pencil from his pocket, and approached the Neptunian who appeared to be the spokesman. Rapidly he drew in outline a rough map of the solar system, assuming that such beings must possess some astronomical knowledge, indicated the sun, marked off the planets one by one, and showed something of the course we had taken from Earth to Neptune.

At first it seemed the sketch was not clear to the Neptunian. He stared at it with a little wrinkling of the forehead, the first facial expression of any emotion we had seen them exhibit, then pointing to the sun in Whitby's sketch, looked up inquiringly.

"Of course," Whitby cried. "I see it. I've drawn the planets to scale, quite forgetting that the Sun is only a small body as seen from here. They mightn't have the means of computing its size exactly."

So in one corner of the sketch he lined in one of the sun-ray plants we had seen, showed a planetary body above it with rays of light stabbing down to the mirrors, then by signs indicated that the central planet in the main sketch was the sun.

The Neptunian grasped it all now. Gently he withdrew the paper from Whitby's hand, examined it in a puzzled fashion, as though the material itself were something new to him, then turned to his companions and began to talk excitedly. It was obvious enough that he was explaining what he had learned from us. He turned back to us after this was done, pointed to the Earth on the sketch and then to us, next indicated himself and the planet Neptune on the map.

He uttered a one-syllable sound, one that we were to hear many, many times after that. Taking a cue from us he spoke as slowly and as distinctly as possible for him without—so I assume—losing the proper tonal value. It was the first sound we had heard from him that would admit of transliteration into any equivalent in human speech. As we rendered it, it seemed the word he was saying was "Tex."

The other machines had come up by this. One of them announced its arrival with a subdued siren note, and all of them began to settle down on their folding legs, and the doors in the body-cases swing open.

At the sound our Neptunian twisted round, called something to his fellows emerging from their machines, then turned back to us with that in his attitude that suggested nearly as plainly as so many words that the newcomers would be better able to make contact with us than he had been.

Nevertheless I fancied we had done remarkably well, all things considered.

CHAPTER XII

Lines of Communication

THE new machines were each larger than the one we had first encountered. They seemed newer and speedier, better found in every way, and I guessed they belonged to persons of some considerable importance.

This theory was borne out when the occupants began to emerge from them. Each machine contained at least half a dozen folk, all larger in size than the three Neptunians who stood near us. The newcomers approached us without the slightest sign of hesitation, walking with a quiet, dignified yet, to my mind, effortless feline gait.

There was just that sort of sleek slither about the body—a thing almost impossible to crystallize into words—that seemed to confirm our theory of the form from which they had evolved.

There followed a brief interchange between our Neptunian and the new arrivals, then their leader approached us. He was nearer our own height; he wore the same kind of colored glasses as the others and that so effectually masked their eyes, and he was dressed in a sort of kilt-like tunic that ended just above his knees. It was gathered in at the waist by a belt of woven metal—a glistening silvery substance to which we could not put a name—and attached to which, hung on tiny hooks, were several things that I could only compare to rods of glass. Some were straight, of unvarying diameter throughout their whole length, one widened at the end to a globe, and another had a series of warty projections at intervals down its length. As we were to learn later each rod had its own particular use, and some of them were not pleasant.

In addition he wore on his head a contrivance of metal that was not quite a cap and not quite a helmet. A number of thin bits of wire, stiff as cats' whiskers, stood up all around it.

What the original spokesman had told him seemed to have convinced him of our good intentions, for he came towards us, halted almost within touch of us, bowed low, a gesture of obeisance. Whether he took us for superior beings, perhaps gods of some sort or whether this was merely the common form of greeting between strangers, of course, we could not say. In the circumstances it seemed wiser to wait and see just what it was.

Then, oddly enough, he began to speak in a low purring voice that lapped about us like a caress, but we could not guess even from his tone what the purport of it might be. He seemed to become aware of this, and apparently the discovery annoyed him. His body quivered, sinuously, and the cat's whiskers, antennae, call them what you will, on his helmet quivered in sympathy.

"I really believe," said Rifflin, under his breath but loud enough for me to hear, "that he's angry because he can't make us understand."

He turned to the Council representative. "Whitby, you'd better say something to him," he remarked. "Show him that lack of comprehension isn't all on the one side."

Whitby gave an odd movement of his shoulders, hardly a shrug.

"Looks as though it may be rather difficult," he said in answer. "If we can persuade any of them to come to the *Icarus* with us, we may be able to tell them something with the aid of our picture-machines, but first before we dare broach that we'd better try to convince them we mean no harm. Suppose they misunderstood us, thought our purpose was to abduct them!"

"Seems to me we'll have to risk it," Rifflin answered. "We've gone about as far as we can with signs and sketches."

"So I think. However, I'll try."

He took some more paper, and made a series of rapid sketches. I did not see what they were, though afterwards I learned he had made an attempt to show the Neptunians entering the *Icarus*, viewing some of the things we had to show them, and then departing on the friendliest of terms with us.

The leader took the sketches, examined them very closely—I imagine he had little difficulty guessing their purport—though he seemed far more interested in the paper itself and in the pencil than in the sketches produced by one on the other. He seemed anxious to try for himself, so Whitby gave him a clean scrap of paper and handed him the lead pencil. He merely made a few, to us, meaningless marks on the paper, and seemed surprised that he could produce nothing as good as Whitby had.

Apparently then they knew little or nothing about sketching, though this seemed a little hard to believe of a race that had designed the mechanical bird and the sun-ray plants. They must have had some plan to work from in the first instance. I thought, however, that I was on safer ground in assuming that they might have no written language, but here again time was to show me the foolishness of trying to generalize from one isolated incident. However . . .

He seemed to understand what we wished, and since he had shown no sign of objection we felt it safe to conclude that he was willing to come to the *Icarus*. Whitby signed to him to come along with us, a complex series of gestures that led from the sketches, involved pointing to us and the space-ship, and that to my mind seemed to tangle up the situation rather than clarify it.

THE Neptunian leader said something to his men, then stalked up and took his place beside Whitby. The little fellow with whom we had first opened communication sought Rifflin, and at that we became aware that they were pairing off with us, probably as a measure of precaution, for each of the Neptunians seemed to keep one hand hovering round the rods at his belt.

As luck would have it there were more Neptunians than Earthmen, and those that could not pair off spread out on either side of us. It was a movement that held in itself the seeds of suspicion, and we kept our eyes lifted for the signs of any untoward move. On the other hand we had to admit that they were quite justified in distrusting us until they had proved to their satisfaction that our intentions were good.

Looked at from their point of view they were actually taking a grave risk in accepting our invitation at all. The story of interplanetary communication has always been one of conflict, indeed our histories tell us that the first encounters with the Martians and Venusians were accompanied by bloodshed. It seems that it is always the instinct of alien races to regard each other as possible aggressors, and forestall attack by getting in first themselves.

In the case of the Inner Planets we have long passed the stage of mutual distrust, and have learned to pull together for the good of the Confederation, but it was long years before the repercussions of our mutual jealousies and distrusts were smoothed over and died away. It would be sad indeed if we and Neptune had to plunge together along that thorny path before we reached a basis of common understanding.

The bulk of the *Icarus*, now they were close to her, seemed to intrigue the Neptunians. Probably they would have liked to ask a good many leading questions concerning her. The barrier of language between us must have irked them as much as it did us. Their leader at any rate made some attempt to question Whitby, then with an odd little twist of his body—a movement we learned later that could express either disgust or a sense of futility—gave it up.

But the *Icarus* must have been absolutely unique in their experience. It is more than probable that at the time of our advent space travelling as a possibility had ceased to have any attraction or even any meaning for them. This is by no means surprising, for after all a race whose sight of the firmament is cut off more often than not by a veil of drifting clouds must necessarily be less interested in the distant planets than those of us to whom the nightly sight of them is ever a reminder and an urge.

The Neptunians, now they had advanced so far, entered the *Icarus* without the slightest sign of hesitation. But it

was there, immediately they had crossed the threshold of the entrance port, that the first spark of trouble was struck. Actually it was our own fault. We should have borne the possibility in mind from the first.

The leader stopped abruptly. The other Neptunians, as though actuated by the same impulse, stopped at the same moment. Then the leader spoke. Of course it was impossible to understand what he was saying, but there was no doubt that he was very angry about something, and his anger seemed to be directed at us. Little beads of perspiration stood out all over the surface of his skin that was visible.

Plainly something had affected him. Not fear, certainly. There would not, in that case, have been that note of anger in his voice. A vast astonishment seized on us. Through the minds of every Earthman present much the same thought ran. Was it the temperature? The beads of perspiration on every one of the Neptunians seemed to suggest it was, yet the interior of the *Icarus* was hardly a degree or so warmer than the surface of the planet outside.

(*Illustration by Paul*)

Then one of the beams from our light revealed the thing that was blanketing us. They were great monstrous things, hundreds of yards in length.

The Neptunian shot a glance from one to the other of us. Possibly our blank surprise was plain enough in our faces for him to read; possibly it puzzled him. Certainly our lack of comprehension angered him still more.

He made a movement, his hand strayed towards the weapons in his belt. I had been watching him very closely, and I think it was the sight of those two actions that brought the solution to my mind in a flash. I claim no credit for that. No doubt the same idea flashed through half a dozen minds simultaneously.

We had seen outside that he could move quickly when the occasion demanded, but now his movements seemed rather on the slow side. There was a sort of dragging

about the way he shifted his body, and the hand that went to his belt dropped listlessly instead of flashing down.

"The gravity's too much for them!" I cried as the solution jumped into my mind.

"Of course," Riffin did not jump. Such a move might have had fatal results for us all. Instead he moved leisurely to the communicator, simulating the dragging listlessness of the Neptunians so well that they must have been deluded into the belief that whatever was wrong it was something affecting both Earthmen and Neptunians alike, and there gave his orders.

THE position roughly was this. As a matter of convenience the conditions on board the *Icarus* were adjusted to Earth gravity pull. Neptune's mass is some seventeen times that of the Earth and its radius 4.4 times that of our own planet. Therefore under the "square law" Neptune's actual gravity pull, taking Earth's as the unit, is 17 divided by the square of 4.4, in other words .87.

To us Earthmen the difference of 13 per cent in the gravity pull, particularly when it was a reduction, mattered very little. Then, too, the life we led, drifting from one planet to another and constantly encountering varying gravity conditions, had inured us to a great extent.

But to the Neptunians, for the first time in their lives, finding their weight increased all of a sudden by some 13 per cent the sensation was anything but pleasant. No wonder that for the moment they suspected some diabolical treachery on our part. Indeed the marvel of it was that trouble did not break out between us then and there. Possibly, however, that odd sense of helplessness this abrupt increase in weight, slight though it may seem to us, gave to them, made them pause.

The next instant of course the readjustment came. Riffin's message through the communicator to the control room had been responded to at once. Another second or so of delay and no one can say what might have happened. But it didn't, and that's all there is to it.

What the Neptunians thought of it all we never learned. Even later when the barriers between us were broken down and we were able to exchange ideas with a reasonable facility the matter was not brought up. Perhaps they had forgotten. On the other hand those immediately concerned may have thought it wiser not to resurrect it, a sort of tacit agreement between the leaders of both sides to regard it as something to be allowed to sink into oblivion.

Our way led towards the common room. In our absence it had been rigged up as a cine-projection theater. And here let me interpolate an explanation of that. When the expedition was being fitted out it was realized that some means of easy communication between ourselves and the peoples we might encounter would have to be devised. Moving pictures that would best convey some idea of the lives and conditions of the inhabitants of the Interplanetary Confederation were selected. Nothing that would suggest we might contemplate aggressive measures was included. It was a selection calculated to impress without frightening any newly discovered planetarians, and bring home to them in the simplest manner possible the wisdom of treating for an alliance with us.

In this connection, of course, the diplomatic measures that would establish relations in the first instance with the newly discovered races friendly enough to insure they would accept any invitation to view the records, were left entirely to the intelligence and initiative of the expedition leaders themselves. On the present occasion, as we have seen, such relations were established almost without a hitch. The pendulum might just as easily have swung the other way. We had experienced one taste of that possibility on Triton.

Diagrammatic pictures of the solar system, and the Inner Planets were first run through with the idea of giving our visitors some conception of our position in space, followed by closeups of Venus, Mars and Earth, fading out to center on the latter planet itself. Continents, oceans were shown, shipping and commerce, the air thronged with air- and space-liners. Then the big cities of the world were shown on the screen, bird's eye views at first, then sections, and lastly the busy levels of the streets.

Ships of space leaving for and arriving at Mars and Venus were viewed in their turn. It was made plain that we three planets were members of the one confederation, on an equal, easy-going, tolerant footing with each other. It was all put so plainly that even one of limited intelligence could follow it from beginning to end without the slightest difficulty.

There was a moment's pause after the carefully selected propaganda pictures had been put through, then the screen sprang into life again, and I realized that what was being shown now were pictures taken on the voyage. The take-off from Earth, the planet growing smaller and smaller, receding into the distance, fading away at last until it no longer dominated the void. A blackness as a new reel was run on, then something gleaming frostily in space, a pin-point that grew rapidly.

Paula clutched my hand. "Why," she exclaimed, "that's the dome of the *Sirius!* They're rescuing us, Phil."

An odd thing it seemed, to stand there, detached as it were, and watch that which had happened to us so many weeks before and so many million miles away in space. I think, too, that this episode interested the Neptunians more than anything that had gone before. It was something without parallel in their experience. Cities and stars, oceans, continents and planets were concepts undoubtedly not unfamiliar to them. But this voyaging in space, a rescue in mid-void, this act of humanity was for them unique. The quick purr of conversation that ran from one to the other, the stir and interest it created showed as much. Riffin and Whitby I think had shown the picture with that one object, that and to impress on them that we had conquered the adverse conditions of space.

One thing after another was run through. Our camera man had been more active than I had imagined. A complete pictorial record of practically every incident of the voyage had been made. Some, however, were not shown. The burial of Adams in space was omitted, just as I have omitted it from this chronicle. Our Titanic struggle with Jupiter was not shown either. There were reasons for this.

We did not know as yet just how we stood. So far we seemed to have made a good impression, we had been received in peace and amity, but we had no means of judging at this stage the motive behind it all. It might be goodwill on the part of the Neptunians. Equally it might merely be fear. To show them we were vulnerable, that we had known momentary terror and despair, and that we had contended with forces that but for a lucky chance would undoubtedly have vanquished us, would have been the reverse of wise.

Triton flickered on the screen, the dead, chill world we had first seen. It looked so still and lifeless from the angle our man had taken it. The Neptunians seemed to recognize it. Their voices rose to an excited chatter; the purring note was almost absent now; one did not need a knowledge of their tongue to realize that they were stirred to the depths of their beings.

Every Neptunian leaped to his feet at the sight of the

Great White things tumbling out of the entrance of the pyramid. A shiver of disgust passed round the room. A note of anger became apparent in the chatter, swelled until it was a baleful chorus whose meaning was unmistakable.

I did not think that the two races could ever have come into conflict with each other. Neither, from what we had seen, appeared at all familiar with the underlying principles of space-travelling, or seemed far enough advanced to construct a vessel capable of negotiating the void. And if anything was needed to clinch this argument I found it in the fact that the first weapon the Tritonians had used against us showed that they could not have the faintest idea of what conditions were on Neptune or any other planet that possessed a breathable atmosphere.

I was still trying to puzzle out the meaning of this display by the Neptunians of fear, hatred and disgust for their neighbors on Triton when the screen went blank. The show had ended, for our leaders, I still think wisely, had cut the scenes showing the destruction we had wrought on the satellite. I found no answer to my questioning then or at any other time, and can only conclude that the Neptunians' behavior was due to some natural instinct of revulsion.

CHAPTER XIII

An Attack In The Night

I DON'T think any of us realized how quickly the day had fled, or how much of the Neptunians' time had been taken up with viewing our picture records.

Once the show was over they seemed loath to depart. Probably they expected to be shown more signs and wonders, but we were by no means anxious to oblige. We had done our part in breaking the ice. We felt it was their turn now. So little of their planet had been seen by us, so few of their people. This little strip of agricultural land, with its checkered green fields, its sun-ray plants and those intriguing buildings was the sum of acquaintance so far with the surface of the planet. And we had met perhaps twenty or twenty-five of its people.

We wished to meet more, see something of their cities as we had shown them ours on the screen, learn something of their lives and customs, acquire a little of their knowledge. That was what we were here for. Above all we wished to begin a study of their language, so that we could communicate with each other more readily.

They did not offer of their own accord to lead us to any of their buildings. Perforce the suggestion had to come from us. It was not made then. Rifflin, we discovered afterwards, was tactfully trying to lead up to it—rather a hard thing to do when one's only mediums of communication are signs and sketches whose precise implications might be very readily misunderstood—when a siren-like call broke on our ears.

The note was that of one of the bird-like machines, that much we knew, but what exactly it portended, of course, we could not say. It had a very definite effect on our guests, however. With one accord they all rushed for the entrance port of the *Icarus*, as though something in the call had scared them pretty badly.

Naturally we followed. At first we could see nothing in the least alarming. The day was drawing to a close, that was the most noticeable thing. The clouds overhead were thickening, and the chill of night was closing down on us. The sun-ray mirrors which all day had followed the course of the luminary no longer gleamed so intensely. The artificial suns set above them seemed not so bright. Their golden glare had paled to a considerable extent. That was all. A nightly phenomenon.

More bird machines were drawn up beside the *Icarus*. Some must have arrived while we were inside. It was from one of these the siren note had come. It was still blaring at intervals as we stepped out into the chill of the evening, a larger machine than any we had yet seen, and now we were listening to it in free air its note sounded louder and more powerful than those of its sister machines.

The Neptunian leader turned to Whitby and Rifflin, pointed to the sky, then to the direction where the sun was, though we could not see it for the clouds, and made sundry seeming incomprehensible motions with his hands. At least that was what they looked like to me.

"Of course," Whitby spoke out loud for the benefit of us all. "He's saying that the night is coming down, and that he must get back before dark. At least I think so. I don't see what else he can mean."

He shut his eyes and put his hands over them.

A crude method, I thought, of conveying the idea of darkness, but the Neptunian leader seemed to grasp Whitby's meaning without any difficulty. He nodded vigorously. First he pointed to where the sun now was, then to where it would be early in the morning, and with a wealth of gesture indicated that he would come again at that hour the next day.

The siren gave another blare, more urgent than before. Our Neptunian cast one glance up at the darkening sky, and scuttled for his machine. His companions were already in theirs. Another few seconds and the whole flight of machines was hurrying across the country with all the speed of which they seemed capable. They dwindled, and finally disappeared in the distance. Where they went eventually, we could not say.

Inside five minutes, save ourselves, there was no sign of any living thing on our section of the planet. Oddly, too, it had become abruptly a silent land, oppressively so. When we spoke it was in awed tones until realization came to us of what we were doing, and then someone laughed at the foolishness of it all.

"What about the night, Commander?" Whitby asked of Rifflin. "What do you think we'd better do? A lot of us, no doubt, would like to stay out on the surface of the planet rather than be cooped up here in the ship."

"So would I," said Rifflin, a trifle doubtfully. "Still, I think it's a case for caution. Until we've learned more about the place we should not take risks. What worries me most though is the way those Neptunians scurried for . . . well, for wherever they were going when they realized night was coming down. It may merely be a general disinclination to be out after dark. Again it might not. They may have had excellent reasons for getting away. Queer, though in an apparently civilized people to be afraid of the dark."

"What sort of reasons?" Whitby asked, harking back to the penultimate sentence.

RIFFLIN shrugged his shoulders. "How should I know?" he retorted. "I don't even know that there are any reasons at all. I merely suggest the possibility. How often must we repeat to ourselves as well as others that we've landed on a new world, where we can hardly expect every little action to spring from the same motives and to bear the same construction as it would on our own planet? Perhaps it is no more than Neptunian etiquette to run away from one's visitors at sundown."

"You think that?"

"I think nothing. I merely suggest possibilities."

"What should we do then?"

"What the natives do. If it's no more than a queer custom, no harm's done, either way. We've shown we know how to conform to local prejudices. On the other

hand if it's nothing of the sort, if, for instance, there's some good reason back of their hurried departure, well, don't you think we'd be foolish to take risks that they, with their knowledge of the planet, won't take?"

"Risks?"

Whitby bent forward and answered in a whisper, so low that the words were lost to us.

THE alarm-bells, ringing frantically, brought such of us as were not on watch duty wide-awake on the instant out of a tranquil sleep. At once as the ringing ceased the general communicators brayed the call to attention.

"Attention! Attention! All units, attention. Action stations in fighting rig." The brazen voice, magnified many times, penetrated to every corner of the ship.

I had tumbled out of bed at the first word, and was climbing into my rig before the words had ceased ringing in my ears. Then, seizing my ray-tube, I started towards the door. I had but the haziest idea where I should go or what I should do. In space or even when cruising over the surface of the planet my status would have been more or less that of a non-combatant in time of danger, my place and duty in the observation room. But now seeing we were at rest on the ground I had to admit myself at a loss.

However, I could not go far wrong by making for the corridor, and the nearest observation port—if any were open—would almost certainly give me some idea of what had happened. Failing that, I was bound to encounter others similarly situated to myself.

I ran into somebody immediately I stepped into the corridor.

"What's wrong?" I asked.

"An attack, I think," the other said breathlessly. It was Whitby by the voice, and I remembered his room was close to mine. "I don't know much myself. It's the lookout-man who's given the alarm, and maybe it's only a precautionary call."

He spoke as we ran. The lights in the corridor were full on. Others were streaming out of their quarters, those of them who had stations hurrying off to them. The rest of us, an odd scientist or so, men who like myself had no posts assigned them for ground work, gathered round the nearest observational port within easy range of the communicators in case any call for our presence in any part of the ship should be relayed.

We could see little or nothing at first. The dank, dark Neptunian night—a cloud-blanketed sky unrelieved by any stars—drooped over all. The artificial suns had dimmed down until they were no more than distant points of light, too small, too weak, to do more than keep the atmosphere warmed a few degrees above the freezing point. I surmised, however, that a good deal of the heat generated during the day must be kept in at night; the clouds would to a great extent prevent radiation on a large scale, and that, of course, would allow of the power of the artificial suns being conserved to a degree.

As our eyes became accustomed to the gloom we were able with a little effort to make out the configuration of the ground. Nothing seemed to have changed since we had last seen it, nothing appeared to account for the sudden alarm. Unless, indeed, the duty men had seen something not visible to us from this point.

Someone plucked at my arm. I turned to see the white, anxious face of Paula. She had been seeking me, she said.

"What is wrong?" she asked in the next breath.

"No one seems to know," I told her.

I no sooner had the words out of my mouth than the *Icarus* seemed to rock. It was as though a wave had lifted her a few inches from the ground, tilted one end and then the other, and let her drop back again to her resting place, gently, without harm, as well as we could judge.

The wonder of it took our breath away. The power that could lift such a ship—nigh a quarter of a mile in length—must be tremendous. In the glare of the corridor lights we stared at each other, wondering, fearing . . .

Again came the lift. This time we did not sink, but the surface of Neptune shrank away beneath us. The land receded some five hundred feet. Uncanny enough it seemed until the meaning of it dawned on me. The gravity screens were being brought into use, holding the vessel poised above the surface of the planet. If that was so, the possibility of us taking off being in my mind, my presence might be required in the observation room.

On the impulse of the moment I caught Paula by the arm.

"Come on," I said hurriedly, "come with me," and half-dragging, half-leading her we raced along the corridor, then from one level to another until I reached my working quarters.

Everything there was as it should be. I spent an anxious moment testing out, thinking a call might have come through in my absence, but though I signalled my presence and availability for work no answering signal glowed on the bank before me. At last the vision-plate lighted up, Rifflin's image showed on the white surface, and his voice addressed me from the communicator.

"I don't think we'll need you, Grayne," he said. "But now you're there, stand by in case of accidents."

"What is it?" I asked curiously.

"Don't know," he returned. "Nobody does. We're trying to find out."

Something had happened. No doubt of that. Some force that manifested itself by lifting and dropping the ship again. The mystery of it lay in its origin. Whether it had been caused by an intelligent agency or was merely a manifestation of Nature—as Nature was on this planet—no one seemed able to say.

The cold beams of our searchlights stabbed downwards, so that every inch of the ground we had just vacated was laid bare to the searching glare. There was nothing to be seen there. The ground itself lay undisturbed.

What could it have been then?

HAD we been superstitious we might have suspected some supernatural agency at work, but whatever else interplanetary travelling has taught us we have at least learned that most things bear a natural explanation, that nowhere in the universe are there malign and disturbing forces at work that cannot eventually be traced to the door of some living intelligence.

Thus the spread of our beams on the ground showed us that it was no earthquake, nothing of a volcanic nature which had awakened us. It had been the work of no apparently visible agency. One suggestion was that a beam from some field of force originating at a distance had touched us momentarily in the passing, just as the giant ray from the reflecting mirrors on Neptune's surface, making a rift in the clouds to allow the weak and distant sunlight to trickle through, had rested on us for a moment on Triton. It seemed not unlikely at first thought, though to negative this idea came the fact that none of our instruments had been affected. Not one had recorded any unusual force emanation.

As we hung there poised in mid-air with the frozen light of our white beams touching the startled green surface of Neptune like caressing fingers the answer to the puzzle

came to us. It dropped like a blanket from the heights of atmosphere above us, and wrapped the ship round and round with layers of darkness.

I turned the view-plate about in some hope of determining what this new and irruptive factor could be, but all I could see at first was a blackness thicker than the darkness of the night, a dull opacity that blocked out sight of everything about us.

Then one of the beams from our lights, sweeping round in an arc, touched and revealed to our startled gaze the thing that was blanketing us. At the same instant the thing itself moved, and we saw that there was not one but many of them.

Great monstrous things, hundreds of yards in length, feet in girth, things with huge grasping claws, and vast spread of wings, long spiked tails, and heads grotesquely human, with odd wisps of beard trailing to make the resemblance even more horribly eerie. Eyes that gleamed at the sight of us, then blinked and hooded as the beams of our lights struck them.

Flying dragons of mythology come to life! Horrors out of Hades hovering above us!

Yet now we knew what they were we felt relief. They seemed less terrible once recognition had come. Knowing what they were we could hope to cope with the menace of them.

Our searchlights went suddenly dim. Our engines thundered. The *Icarus* shot off on the level as though to escape from the things, and the giant dragons came cleaving through the air after us. Vast things, of a strength incalculable, with an intelligence too that enabled them to combine in the effort to lift the ship in the grip of their mighty claws. They had shifted us an inch or so then, found our weight too great and let us be while they formulated some new plan. That at least was how I read what must have happened.

And this new plan? It brought them hurtling after us, brought others dropping down from above, striving by sheer weight of numbers to bear us to the ground. One came charging straight at us from out of the dank sky, and hit us a glancing blow as the *Icarus* swerved to avoid the rush. But even then the ship shuddered all along her length, and the creature, dazed and surprised but apparently uninjured, reeled off at a tangent.

The impact woke a queer fear in me that redoubled a moment later as there came the rasp of great claws and iron beaks on the shell of the ship, hammer-like blows that echoed and rang through every nook and corner. The *Icarus* had been stoutly-built; she could stand stresses and strains that would snap a liner asunder, but there was something about the steady persistence of this attack that had its worrying side.

By rights the thing that charged us should have been torn to pieces by the vehemence of the collision; the other things attacking our shell should have found their efforts vain, and retired with broken claws and shattered beaks; but neither of these things had happened. In both instances they seemed undamaged. It was the realization of this that sent a cold shiver through me. Why they might yet succeed in breaking a way through our armor!

The communicator blared out brassily.

"Stand by for ray attack," came Rifflin's voice. "Adjust anti-glare shields for work in atmosphere."

I slid the filtering screen over the view-plate, adjusted my own glasses and handed a pair from the rack to Paula. They were huge things, not unlike the ancient motor-goggles, that fitted close over the eyes and rendered them what one might call light-tight. Actually their function was to screen the eyes from all harmful rays that might be given off during a prolonged and concentrated beam bombardment.

We adjusted them just in time, for the next instant the warning signal sounded through the ship. The surface of the view-plate seemed to crackle with living light as the rays shot out, and a beam impinged on the body of the nearest flying thing that we could see. That moment should have been its last. Normally anything caressed by the heat-ray should have volatilized instantly.

Nothing of the sort happened. Instead a slow, lazy cloud of steam rose from the huge bulk, then from another and another as the rays hit them until we were totally enveloped in the white vapor, and our view-plates and the glassite surfaces of the observation ports covered with a film of moisture, so that actually we were flying blind. And on top of that something struck the *Icarus* again and again until it seemed nothing made by man could possibly stand the strain.

That in itself was bad enough, but the situation was made even worse when giant beaks and talons rasped more angrily than ever on the hull. One end of the ship seemed to lift up. They were trying to turn us over in the air as a man might turn a stick floating in water, gripping the serrations of the rocket tubes, pulling and tugging and attempting to draw us the way they wished.

For the moment we trembled, wondering where it would all end. Our only safety seemed to lie in flight, yet they were so hampering us that it looked doubtful if we could get up speed with sufficient quickness to escape them. Rifflin, too, must have seen this, but an idea came to him that had not occurred to me. He signalled through that we were taking to space.

The *Icarus* tilted slowly over as though they were trying to turn her end over end. She shook shudderingly in the grasp of dozens of giant talons, then came the thundering roar of the rocket tubes, and the feeling of utter weightlessness as full normal repulsion was turned on in the gravity screens. We had little or no time to adjust the rectifying mechanism. My last conscious memory was of attempting to wreathe my arm about Paula to steady her. Then the room seemed to reel before my eyes and everything went black.

That phase could not have lasted long. Somewhere in the ship someone retained the spark of consciousness necessary to right matters, and notch us on to our normal ship-created gravity. We breathed again.

Our abrupt leap into space carried our attackers with us. So quickly had we shot beyond the limits of atmosphere that they had neither the wit nor the ability to let go. And there on the edge of space the pressure of the air within their bodies—naturally not rigidly braced to withstand the absence of pressure outside—had literally blown them to pieces, completing the work of destruction that the friction of their swift passage through the atmosphere had begun.

CHAPTER XIV

Neptunian Submission

OUR experience had been too terrifying to allow of our returning immediately to the surface of Neptune. We could not say what other terrors of the night might not be lying in wait for us. The Neptunians' hurried dash for home at the approach of sundown bore a different construction now. Their fear, if it had been fear of the flying dragon things, was understandable.

We decided it was better policy to cruise outside the atmosphere until morning. Then we could descend to our old landing ground with reasonable certainty of not being

attacked unawares by any other monstrous forms of life.

Now that we had leisure to compare notes, no one felt inclined to go to sleep again. It came out that the duty men had first had their attention attracted by what sounded like a concerted attempt to break in the entrance ports. Probably the ship's lights in the first instance had drawn the queer creatures. Then, whether with their claws and beaks or by burrowing under the bulge of the hull we could not say, they had managed to raise the ship an inch or so off the ground. It does not sound much, but the magnitude of the feat becomes apparent when one thinks of the enormous weight of that quarter-mile long metal ship. The teamwork behind it, too, showed a certain group intelligence that was not the least of the disturbing characteristics of our attackers.

They had made more than one attempt to lift the ship, and the chances are that they would have ended by cracking it open as a man cracks an egg with a spoon, had we not quitted the ground.

The incident had its valuable side. It brought home to us in the most effective way what our own common sense should already have warned us about, that we could not afford to take anything for granted on a strange planet. Any assumption that conditions would be similar to those on Earth was foolish in the extreme. Both animal and plant life might be actively inimical to us for all we could say to the contrary, and until we had satisfied ourselves that they were innocuous we had better assume that they were not.

In this respect we could hardly conclude that we had seen the last of the "dragons." If they were gifted with the intelligence we believed they were they would almost certainly make retaliation for what we had done to them. However, this time we would not be taken off our guard, though we had yet to find the weapon that would deal effectually with them.

The heat ray had only acted slowly. There had been none of that abrupt bursting into flame we had expected. Their bodies seemed to contain such an excess of moisture that they would not volatilize instantly, but short of carting the dragons individually out into space there was apparently no other way in which we could deal with them. That, at first sight, appeared to leave us at their mercy in atmosphere.

At the first sign of dawn we descended again, moving very slowly and carefully down through the clouds. The odds were that the creatures' habits were purely nocturnal, but since we had no exact information on that score, we felt we could not afford to take risks.

Actually we saw none, though one of our lookout men reported that with the telescopes he had picked up a number of swiftly-moving black dots that appeared to be heading towards some mountainous country on the distant northern horizon. No one else had noticed them, however, and they had vanished before he could call attention to them.

We steered towards our original landing ground, and were dropping down to it when we became aware that there was a crowd of some sort gathered there waiting for us. There were more Neptunians and more of the machines than there had been the previous day. As we approached nearer it became evident that they were not looking for us so much as looking at something dark and bulky on the ground. Whatever it was they were keeping a reasonably respectful distance from it.

I swung the view-plate round to cover the scene, and adjusted the magnifying sights. And at that the situation became plain. The dark thing on the ground, looking huger now that the view-plate had a telescopic range, was without doubt one of the flying dragons we had fought with the previous night. Just as obviously it must be dead, otherwise I could not imagine the Neptunians venturing as close to it as they had.

Its great head was lolling oddly on one side, as though its neck were broken. One mighty wing was spread to its full extent, but of the other I could see no sign. It could hardly have been doubled up out of sight under the body. But presently I managed to make out on that side a great curve of bone sticking out like a bent finger. The wing membrane between had vanished.

I DID not know whether Rifflin would thank me for breaking in on him at that moment, but I fancied the sight was one to which his attention should be directed. I pressed the call button communicating with him, and almost instantly his face glowed in the vision-plate.

"What is it, Grayne?" he said. "Seen anything?"

"Only that dragon on the ground with the crowd of Neptunians about it," I answered. "I thought I'd better point it out to you, and one or two things in connection with it in case you missed them."

"Thanks, we've seen it. But what are your particular items?"

"Neck broken, one wing intact, the other with the bat-like membrane missing."

Rifflin whistled softly. "Thanks for that. It's fallen from a height evidently, not far enough up to smash it up, but with enough force to break its neck. I wonder — You say all the membrane has disappeared. Sure of that?"

"Every last bit. Yes, I'm sure. I've had the telescopic sights on it, and Miss Fontaine here has checked up my observations. Have you any idea . . . ?"

"Of what happened? A glimmer. But we'll have to wait till we ground to see whether or not I'm right. You know the trouble we had with the heat ray? Couldn't volatilize them. Well, it seems to me we did better than we knew. By some sort of lucky accident one of our beams must have struck this beast's wing. Being membrane, texture like a bat's wing, the ray acted on it more readily. If that's so—I'm only guessing—we've found their one vulnerable spot, and maybe can meet them on equal terms next time, if we're unlucky enough to meet them again at all. I'll note you first drew my attention to it."

The vision-plate went dark. His voice ceased.

We, Paula and I, stared at the view-plate, watching the rapidly enlarging scene on the ground. She shuddered as the bulk of the dead dragon grew plainer.

"What a horrible thing! Why," she exclaimed, "it could carry a man off quite easily in those huge claws, like an eagle would carry a sparrow."

"Only even more easily," I said, and again she shivered.

"What's up?" I asked. "Not feeling well?"

"Quite well, Phil, only . . . Perhaps it's foolish, but the sight of that thing there on the ground . . . It frightens me . . . as if . . ."

"As if what?" I said encouragingly as she stopped.

"I don't know. The thought of it carrying anyone off . . . one of us . . . It's a terrible thought."

Her face had gone pale, her eyes a little too bright. I put one arm around her and drew her to me.

"You're tired," I said. "No sleep worth speaking of last night. And overwrought. You've seen things . . . Better not look at it, if that's how the sight affects you."

But she did not take my advice. Instead she stared fascinated at the view-plate, though after a while it seemed that the fear that had seized her must have passed.

We were dropping silently, so that the Neptunians could

not have heard us. Apart from that they were not looking skywards. I should imagine they did not expect to see us again, perhaps had concluded that the flying dragons at the cost of the life of one of their number must have carried us off, ship and all.

A thousand feet above them we gave a call on our siren, graded low so as not to startle them too unduly. Even as it was we threw a pretty stiff scare into them. The crowd milled about, went into a panic, and scattered blindly. In the midst of running away the truth must have dawned on some of them. Glances were thrown skywards. One after another came to a stop. Some of the machines that had already started were brought about. We could almost feel eyes going from us to the dead thing on the ground, then back again, perhaps an attempt to fit in two successive phenomena as cause and effect.

They cleared away sufficiently to allow us room to land. We came down lightly as a feather, grounded, and were at rest. Our entrance port was flung open. First to greet us was the Neptunian leader of the previous day. He had others with him, men to whom he deferred. There was nothing richer or more distinctive about their dress, but it was evident from his bearing towards them that they were higher up in the social or administrative scale of the planet.

At the sight of us they became voluble. Their inability to convey to us the thoughts in their minds upset them to an amazing extent, needlessly so. It was evident enough from the signs they made at what they were driving. They pointed to us, to the *Icarus*, and then to the dead flying dragon. Their very attitude was in itself a question.

We indicated by signs that the dragon's demise was due to us. They seemed incredulous, then amazed, and finally overjoyed. Perhaps they had visions of the *Icarus* sailing round the planet and, almost effortlessly slaying the dragons by the score, finally exterminating the vicious brood. Just as well no doubt that they did not know the exact facts of the case.

LUCKY for us, though, that this had happened in this way. It certainly broke the ice for us with a vengeance, and gave us a standing with the Neptunians that we might have found it difficult to attain otherwise.

Now we had got so far Rifflin and the scientists with him decided to examine the body while they had the opportunity. Since it was highly probable that it was by no means the last of the creatures we would have to deal with, the more we could learn about them the better. I was for hanging back myself, particularly as it wasn't my party, but Rifflin noticed me and with some idea no doubt of marking in this fashion my call to him, beckoned to me to come along.

"You'd better stay behind . . . in the ship," I said to Paula. But she shook her head.

"You may find it upsetting. You didn't like what you saw of it earlier," I pointed out.

"I know. I probably won't like it," she returned. "But I'd rather come. I want to be near you, with you."

I had an idea that she meant to say something more, but if so she changed her mind quickly enough, and said nothing. I stared at her. This two-sided mind of hers was something rather beyond my comprehension. Some nebulous fear that probably would never crystallize at all had seized on her. Too vague a thing possibly even to put into words. Oh, well.

It was much as Rifflin had surmised to me. The blackened and calcined remains of the wing bone showed that the bat-like membrane had been blasted clear of its framework. Sundry singed spots on the body showed too where the ray had got home, though it would have taken a steady and continuous play to have done any considerable damage there.

The wing-spread must have been between forty and fifty feet from tip to tip. The body looked huge, though actually I should imagine it was lighter than it seemed, even taking into consideration the lifting power of the wings. On the other hand one must remember that the air of Neptune is much denser than that of Earth, which would to a great extent counteract the effect of the extra weight. The head, as I have already recorded, was oddly human, this despite the short, heavy beak. Queerly enough the beak, if anything, seemed to accentuate the human likeness. The body itself gradually tapered away to a barb-like tail, that in some ways reminded us of the sting of a scorpion.

It was this suggestion that made us go warily in touching the body, and it was just as well we were careful, for we learned later that the creature was in the habit of using the tail as a weapon. It possessed certain unpleasant toxic qualities, and while not actively poisonous in the accepted sense of the word, brought on a species of paralysis from which recovery was doubtful or at any rate difficult in the absence of prompt remedial measures.

A fairly thorough examination and a further test with our portable rays convinced us that our original ideas were correct. The body itself was impervious to the stab of the beam to the extent that it penetrated only slowly and with considerable difficulty. The wing membrane on the other hand vanished instantly the ray was turned on it. A puff of smoke, and it was not.

The great saucer-like eyes presented a feature of unusual interest. They were many-faceted, like those of a fly, a condition that, outside the insect world, is unique among the living things.

Our Neptunian friends had watched us from a distance. None of them, even though they knew the creature was well and truly dead, seemed anxious to approach nearer than fifty feet or so. Indeed their whole behavior struck me as rather odd. That they possessed a civilization advanced many stages beyond the primitive was amply evident from the little we had seen of them. One would have imagined that they would not have existed so long on their planet without having devised ways and means of combating the menace of the flying dragons. But apparently they had not. They appeared curiously helpless in this regard, even abjectly afraid. It, like many other things that puzzled us about Neptune, was only solved after we had gained their confidence and were able to learn something about their history.

We debated among ourselves what should be done about the body of the dragon. Manifestly it could not be left where it was, to rot, and, perhaps, breed a pestilence of a minor sort. On the other hand we had already formed so poor an opinion of the Neptunians' initiative that we felt sure they would take no steps in the matter.

It was Whitby in the end who suggested purely as an experiment that we should try and destroy it with the concentrated battery of the ship's heat ray. Of course the ordinary type of atomic disintegrator would have dealt with it in half a second, but we carried none. Indeed their use was forbidden even on the Guard ships except in case of dire emergency. It was felt by the Council that it was far too destructive a weapon to be allowed to get into general use.

Well, the battery was turned on. It took thirty-five minutes by the clock to reduce the body of the dragon to ashes, and even then the ground for yards round was baked powder-dry.

The Neptunians watched with awe the beams from the hovering *Icarus*, and at the end when we descended again

to our landing place and emerged from the vessel we were treated with the respect men might accord gods descended from the sky. Three of the Neptunians, who seemed to be the leading men, came towards us, prostrated themselves before Rifflin, Whitby and another of our men who happened to be with them at the time, each gently lifted the foot of the Earthman facing him and placed it on his own neck.

Rifflin, Whitby and the other man stood thus uneasily for a moment in the attitude of conquerors. Then with a short laugh Rifflin withdrew his foot, and bending down touched the Neptunian on the shoulder, signing to him to rise.

The whole thing seemed rather ridiculous to us.

CHAPTER XV

The Domed City

IT is not business to record here with any precision of detail the minor events of the next few weeks, or the long and tedious process following that by which at last we managed to make the Neptunians understand that we wished to visit other parts of their planet, learn something of the history of their civilization, become acquainted with their resources, and acquire a knowledge of their language. That has already been dealt with more fully elsewhere.*

Suffice it to state here that the way was not made plain to us all at once. We met with doubts and hesitations; we were faced with suspicion, and our motives questioned. At times there was even an undercurrent of hostility. But more by good luck than for any other reason we won through eventually.

We could do nothing until we had learned at least a smattering of their language. That took us months, for it proved a difficult task, and at the beginning we had little in common, from a linguistic point of view. However, they seemed eager to teach us and at the end we were able, without fear of misunderstanding, to make our wishes known.

It was a couple of months or more before we were allowed to visit any of their cities, but at last it was intimated to us that our wish was to be granted. So one day we took off in the direction indicated, towards that distant collection of glistening domes on the southern horizon. A couple of Neptunians, our friend of the first day, and the leader of the following morning's arrivals, consented rather diffidently to accompany us in the ship. Their names were Halvus Tar and Mahbut Ahl.

The rest of the Neptunians followed us in their mechanical vehicles while we slackened the pace of the ship so as not to get too far ahead of them. None of them seemed to travel very far on foot, indeed all the time we were on the planet, with one exception, I don't remember seeing a Neptunian walking farther than a few yards. It was not that they could not. They possessed a more or less perfect mechanical form of progression, however, and they did not see why they should expend their energies in doing what the bird-like vehicles would do for them.

The domed city turned out not to be so large as we had imagined. Really it was only one building, though the large roof space had been split up into a number of domes and cupolas, all made of that vitreous substance we had noticed before, and which was neither glass nor quartzite. For long we thought it was some compound, but subsequently discovered that it was actually a mineral, mines of which were found in various parts of the planet. Exceptionally light, exceedingly tough, yet readily workable above a certain temperature it was an ideal substance in many ways. The Neptunians found an infinity of uses for it.

There was nothing in the nature of a landing ground anywhere in the neighborhood of the domes, but Halvus Tar signed to us that we could descend wherever we pleased. We chose a spot of level ground about five hundred yards away from the city. It was as we were descending that a fact that should have been apparent to us before became obvious. The domes were not the roofs of buildings, unless those buildings were somwhere underground. Their edges were set flush with the soil and despite their look of extraordinary transparency we found we could not see through them from above. This, no doubt, was due to the highly polished surface they presented, and which reflected back the light in such a way that we could see only our own mirrored images.

The rotational watch was left in charge of the ship, and the rest of us disembarked to make our first acquaintance with a Neptunian city. Each of the domes was provided with a number of doors set at ground level, and guarded by men armed with those odd glass rods. Apparently we were expected for the door we were approaching opened at our advent and under the guidance of Halvus Tar and Mahbut Ahl we were taken inside. The door slid to behind us with an absence of sound that was uncanny in the extreme.

Once inside we blinked in the dim light, so different from that outside, and for some time we had difficulty in seeing with any degree of clarity. Our two Neptunians, however, were differently circumstanced. They removed the goggle-like glasses from their eyes, and for the first time we had an opportunity of seeing an inhabitant of the planet without those masking contrivances.

In the dim light their eyes seemed oddly phosphorescent. They glowed in this artificial twilight with the greenness of flawless emeralds. Seemingly they saw perfectly. This half-light was evidently natural to them.

We were very vaguely aware of other dim forms flitting along, passing and re-passing us, and at regular intervals crossing our path, so that we concluded we were moving along the equivalent of city street levels. The way we were taking dipped and rose, and dipped and rose again, wound and twisted until we judged we must have come at least a mile from the entrance and descended some five or six hundred feet. The domes which in a dim way had been visible above us for the first few minutes of our walk seemed to have vanished now. I judged that we were well underground now.

IF this was a fair sample of the cities of the Neptunians it looked as though the race existed subterraneanly. Whether this was from choice or through force of circumstances did not immediately appear. Reasoning back from their fear of the darkness of night on the surface of their planet I felt inclined to believe, however, that at some period or other of the race's history they must have been driven by the stress of events to take shelter underground.

Paula at my side murmured, "I don't like this, Phil. I think we're foolish to trust ourselves here . . . like this."

"Nonsense," I said. "What's there to worry about?"

"Oh . . . I don't know. Only . . . I do worry. Woman's intuition?"

One of our Neptunian guides turned suddenly to stare at us. I caught the green flare of his eyes in the gloom. For one wild moment I had a feeling that he understood and resented what had been said.

"Sh," I said. "They're listening."

*In "Problems of Interstellar Communication," Vol. 3, Chapter 2, a work published in the year 3237 at Earth Center City by the Interplanetary Board of Control.

Foolish to think that? I don't know. No more foolish it seems to me than was Paula's suggestion.

I shrugged my own idea aside the next instant.

"Of course they're listening. Of course they hear us," I amplified. "But I hardly think they understand much, unless our tones tell them anything. So, if you wish to speak, make your voice unemotional. What's this about intuition and being afraid now?"

"Put it this way, Phil. We've assumed—I don't know what right we have to think that—that these Neptunians are all the one race. How foolish we would think a stranger who imagined from his experience of one section that we of Earth were all white, all yellow, or all black? We must allow for divergences of type here as on our own planet."

"Yes?" I said softly, encouragingly. I had the glimmer of an idea where this was leading.

"But the differences here," she ran on, "may not be of race and color, but of type. These are one race"—the dim-seen sweep of her arm indicated our Neptunians—"the flying dragons another. A third, a fourth, perhaps many more types that we have not yet seen. Who is to say which is the dominant race?"

An interesting speculation, I thought. As a matter of purely academic interest, quite intriguing. That it should touch our little lives in any considerable fashion seemed inconceivable. I told her so, in soft-voiced tones, terms calculated to soothe her vagrant fears. She agreed with me . . . in words. Her tightened grip on my arm, however, showed me that in thought she still maintained her own ideas.

We came to a spot where this underground city widened out. A sort of circus perhaps. There were steps leading up to it. A soft-toned light carried by one of the guides flashed down to reveal them to us. I saw the Neptunians' hands go up to their faces, sliding their peculiar goggle-like glasses into place, and I wondered. Paula's grip on my arm tightened not inconsiderably.

We turned a corner . . .

We were in a vast amphitheater. It glowed with lights, soft-shaded blue lights that because of the dimness in which we had hitherto moved dazzled our eyes momentarily. A vast crowd had here assembled. We could hear the purring murmur of many voices, see the massed forms bathed in the ghostly light.

"The little electrodes felt warm against my forehead. Out of the chaos of thought, ideas began to form themselves."

(Illustration by Paul)

Whatever there might be at the farther end was hidden by the press of people.

"What in the stars is this?" came Rifflin's voice from somewhere at hand. "A mass meeting of welcome?"

"No," I said, thinking the question was addressed to me. "I think not. They're facing the other way."

"Oh, it's you, Grayne. Why, so they are. So that's it then. They don't seem to know we're here. Well, we'll be introduced quickly enough, I should imagine. But—mark this, all of you, and pass the word along to those who can't hear. I'm purposely speaking low—keep as close together as we can. No, I don't anticipate that anything will go wrong. On the contrary. Still, one never knows. Other planets, other customs. Just as well to be prepared in case of anything."

I did not think much could happen. I doubt if anyone did. We were all armed, and the Neptunians, from what we had so far seen of them, seemed not to possess any effective weapon. The functions of those glass rods they wore dangling at their belts was problematical. Nevertheless the habit of caution was strong within us. Strangers on a strange planet could hardly be blamed for not accepting everything immediately at its face value.

SOMEWHERE in the distance a gong clanged brazenly, and its rolling note echoed and re-echoed round the amphitheater. It seemed a signal. The murmuring died away. A silence—a death-like hush in which our footfalls were the loudest sounds—dropped down like a velvet curtain. The far end of the amphitheater which had hitherto been in profound darkness as far as our eyes were concerned, became visible, bathed in the blue light that seemed the only form of underground illumination the Neptunians possessed. We were able to see that some sort of a platform or dais occupied the space.

The dais itself was clear, save for one particular spot. There, in almost the exact center, was an object whose precise nature, whose precise form even we could not exactly define. It seemed more or less cylindrical; we had an idea that it was made of crystal, but the waves of blue light, coming from a hundred and one concealed points, lapped it round, advanced and receded like the waves of the sea, so that it was alternately revealed and obscured.

"Gods!" Someone's voice hissed in my ear. "Whatever can that be?"

Some object of worship was the first answer that jumped into my mind, some radioactive thing—this I judged from the odd pulsations of light that came from it with the regularity of a heart-beat—in principle unknown to us of the Inner Planets. We could only stare, stunned and a little afraid.

Someone, Halvus Tar I think, touched my arm. His gesture, dimly seen, suggested that we were to approach the dais. His colleagues had conveyed similar wishes to the others. Our little party moved forward, half-reluctantly, wholly curious.

At the foot of the dais we would have halted, but again came that touch from our mentors urging us on. So we climbed the few steps, and halted a foot away from the thing. Crystal of some sort it seemed at first and even second glance. It was oddly opalescent, queerly opaque where one would have expected transparency. Little flickers of living light playing round it like caressing fingers. They hurt even our eyes if we looked steadily at them for any length of time. I noted that the Neptunians had again donned those protective goggles they had worn on the surf[illegible]

I don't know how the idea first came into my mind, but of a sudden the feeling came over me that this seeming crystal globe, with its flickering lights, was a living thing, an intelligence, if you like; something weird and strange in our experience, but none the less as much a definite entity as any one of us.

And at that the blue lights flickered and died, and the green and white and rosy tints of the globe leaped up, brighter, more actively than ever. The surrounding darkness perhaps made them seem all the more intense. Something within my brain began to throb. It was as though unseen hands had reached out to make contact with us.

"Phil, Phil"—Paula, creeping into the protecting curve of my arm spoke in urgent whispers into my ear—"it . . . it. . . whatever it is. . . it is trying to speak to us."

CHAPTER XVI

An Ominous Interruption

THE idea staggered me. I could not believe it. I did not want to believe it. It seemed too incredible, too utterly preposterous. Yet something—that thing throbbing in my brain, perhaps—insisted that Paula was right; that this was just what the globe was trying to do, that the throbbing itself was one result of its efforts to communicate with us.

It was an elusive thought that echoed in my brain. An idea like an air half-heard. Something forgotten, yet haunting, aggravating in its very evasiveness. As though my brain were trying to register the emotions of this intelligence—if so it was—in front of us, and finding itself frustrated by some as yet incalculable factor. A thought that shaded off into irritability, anger that we could not respond, a vague contempt of intellects not capable of rising to its level.

Our two mentors, Halvus Tar and Mahbut Ahl, who had advanced with us to the dais, were staring at us, not quite sure. Then abruptly Halvus Tar seemed to reach some decision, or perhaps an understanding of the situation came to him. He bent down. It was then I noticed at the foot of the dais a pile of some things not unlike audiophone head-pieces. He handed one to Rifflin, motioning him to put it on, passed a second to Whitby, and so on until he and Mahbut Ahl between them had equipped all our little company.

I have said the instruments seemed like audiophone head-pieces, but there were differences of detail. There was for a start a band that fitted round the forehead, and at intervals there were tiny little disk-like electrodes—so we judged them to be—on the under side that clamped themselves against the skin of the forehead. From either side, from ear to ear, across the top of the head, there ran three curved pieces of metal, set a distance of an eighth of an inch apart. On the exact center of the crown of the middle span was set a glittering filmy disk surmounted by tiny thread-like antennae. The whole quivered incessantly, like gold leaf when one breathes on it. From each head-piece there ran a small yet surprisingly strong wire that led to the base of the globe itself.

There was a pause while we adjusted the head-pieces. For an instant after that a queer confusion of thought filled my mind, doubts, queries fears . . . I know not what else. Then that cleared, and I became aware of a new receptivity and placidity of mind. I realized then what this must be . . . some mechanical means of thought-transference. An instrument that could tune in on our thoughts, as we could tune in on the globe's.

Not so wonderful a thing now one saw it in operation. The underlying principle was by no means new. Even at the beginning of the twentieth century in scientific circles it was known that there were such things as thought waves, that they were no more than a series of high fre-

quency vibrations originating in the neurones of the brain tissue. The range of these vibrations, however, was too limited and their intensity too feeble, and no practical means had been devised, despite two and a half centuries of work and experiment, of amplifying them mechanically. Perhaps it was well for the human race that they had not. However, it seemed that the Neptunians, or at least this entity of the globe, had solved the problem.

The lights no longer played about the surface of the crystal. It had become illuminated by a uniform golden glow that pulsed slightly as we watched and waited. Something seemed to be playing about the surface of my brain like ragged clouds driving across the sky ahead of a breeze. The little electrodes felt warm against my forehead, with an odd prickling sensation. That passed almost at once, and out of the chaos of thought ideas began to shape themselves. It was as though I had picked up something in mid-sentence, the first half of the thought whirled away before I could grasp it.

The solution came in what the globe was saying, or rather what it seemed to be saying, for there was no sound uttered at all.

". . . some of you have difficulty in understanding. All of you are not of equal intelligence, but those who fail to comprehend all that is thought can have it explained to them later by those who understand.

"I am all that is left of the great days of this planet. I am Gark, the Great Brain. I live, I think, and I record the things that happen. But I cannot do. I have passed beyond that. Soon I shall pass altogether, as this race shall pass. It is declining now, its initiative gone, a world drifting indolently towards extinction. When there is none left to tend me, I too shall pass, shrivel and cease to be."

There was more on the same lines, much that I did not understand, thought gaps that I was only able to fill in later when we compared notes and between us achieved some sort of a synthesized impression of what had really been told us. And since it will save much time and make many things plainer I prefer to give the information received from the brain in the globe more or less in the form in which we ultimately cast it.

NEPTUNE, or Tex, as its inhabitants called it, was a world much older than our own. It had reached the pinnacle of its civilization while we of Earth were still primitives. Then, too, it had developed along different lines. The Neptunians were essentially an agricultural people, with only a limited knowledge of mechanics. The climate of most of the planet was mild, even genial. In those days, too, they were warmed by two suns, one actually the larger and more powerful a very great distance away, the other, smaller and not so strong, comparatively close.*

The Neptunians we must assume in the absence of any evidence to the contrary were all of the one race with the one language and probably little variation in customs from one locality to another. The great brain at least never referred to any divergences of race or color, and the history of the Neptunians contain no record of any such barriers between peoples. That being so, we can only conclude that on Neptune there had never been the necessity for any such welding together of nations as there has been on our own planet.

Probably never at any time were they a very numerous people. Perhaps the very smoothness of their existence was one factor in keeping their numbers down. For the greater part of their history they did not know the immediate pressure of necessity, or the inexorable threat of undefeated nature.

Of animal life there was apparently little or none, and life capable of flight seemed to be unknown with the exception of the dragons, about whom I shall have more to say later. It is enough to note now that they were not native to Neptune, and were actually comparative late comers to that planet. Apparently the only bird life was something in the nature of the ostrich or more correctly the extinct moa of New Zealand, a huge wingless bird that probably stood some twenty feet in height, and that passed out of existence in the early days of Neptunian civilization.

It can be readily understood then that when the Neptunians began to experiment with some sort of mechanical traction they should go to nature for it, and evolve a machine on the lines of the one form of life they knew that was capable of covering great distances at a high speed. There as elsewhere they went to nature for their models. Man's discovery of the principle of the wheel seems to be a direct violation of this law which otherwise is general throughout the universe.

Apart from this and one other essay—if so it can be called—in applied mechanics, the Neptunians seem to have been rather a failure as inventors. Their bent took them more along psychological and chemical lines. Their notation is different from ours and their time conception is difficult for an Earth mind to grasp, and consequently there is a good deal of haziness about certain aspects of their chronology. It is a moot point for instance whether they succeeded in achieving a remarkable stretch of longevity or whether they merely mean that the gradual eradication of all disease-producing factors enabled them to keep their full health and strength almost to the end of their allotted span. A good many wise minds are inclined to think that the latter was the case. All through the universe each planet's time conception seems to be based on the period taken by the particular world to complete a revolution round the sun. Since Neptune takes 164 years to do what Earth does in one year it would seem to follow that the average three-score years and ten of an Earthman's lifetime—more simply the time taken by our planet to make seventy complete revolutions round its central sun—would give the Neptunians, if their year was calculated on their planet's orbital time, the unexampled life-span of eleven thousand of our years.

But there again all attempts to reach some satisfactory basis of computation are complicated by the imponderable fact of their second sun, for it is impossible to say in what way the intrusion of Jupiter as a solar element may have affected their calculations. Presumably it must have had some influence on them, just as the fact that their relations to Jupiter and the sun were constantly changing and must have admitted of considerable variation, climatic and otherwise, undoubtedly spurred them on to the invention of the solar mirror plants.

In this no doubt they were hampered by the further fact that they had never been very good astronomers. As time went on, however, it became necessary to rely more and more on the heat and light of the distant central sun. The powers of the nearer one were not only waning rapidly, but the relative positions of the two planets, with all that that implied, were constantly changing. Experiments were made. One invention after another was tested out. Some were rank failures from the start. Others, while practicable in a small way, proved unable to work to the necessary capacity on a large scale. Finally the present

*At first sight this statement seems almost incredible, yet it brings support to the theory of a certain school of astronomers who hold that Jupiter is more of a solar than a planetary body, and that that planet and the sun may have at one period formed a binary star. Jupiter, being a much smaller body naturally cooled quicker, and, the fires of its radioactive interior dying away, assumed planetary characteristics.

system of giant collecting mirrors was adopted, and a method evolved of storing the light and energy thus obtained.

THIS done the race had little to fear until some date so far distant in the future that it was almost impossible to visualize. Their needs were simple. They were not a prolific people; they had none of the predatory urge to reach beyond the confines of their own world that characterizes the folk of the Inner Planets, and lacking the spur now, either of imagination or necessity, they sank into a state of calm indolence that might well be called the prolonged twilight of their race.

Yet it must not be supposed that Neptune was entirely devoid of men of brains and intelligence. She had plenty of them, though their interests lay along different lines from ours. The Great Brain himself was a sample of one not altogether successful experiment, an attempt to create a kind of supermen. More correctly, it was an endeavor to reduce the nation's functions to purely intellectual conceptions. Its failure lay in its very success.

Centuries of experimentation evolved beings with mind powers far superior to anything of which we have any record. They probed the innermost secrets of their own planet; they became vast storehouses of knowledge, and in the process they lost all we count worth having. They developed the brain at the expense of the body. They became huge, bloated, football-like things, surprisingly delicate and fragile, and all their bodily functions and appendages shriveled and retracted until there was scarcely a vestige of them left. The gain in intellect was more than offset by the complete loss of all powers of locomotion.

In the end it became necessary to protect the Great Brains against all the accidents to which ordinary flesh is heir. They were encased in specially constructed globes such as the one we saw; their mental functions were supplemented to a great extent by mechanical contrivances, and actually the Great Brain itself within the sheltering globe was immersed in a liquid that combined the joint effects of a cooling spray and a supply of nourishment. It had to be replenished at regular intervals.

Despite this, one Great Brain after another shriveled and perished, until at last only one was left. The common people on whom no such experiments had been made regarded it both as an object of a mild form of worship, and as an oracle to whom they referred any knotty points that arose. Its ability to draw on its storehouse of knowledge was of course limited by its own experience. It could only think ahead on the lines of what had happened in the past. It had reached the stage where it was no longer capable, if indeed it ever had been, of evolving a pure concept of imagination from out of its inner consciousness.

Whether our advent and the proof we brought of teeming life beyond the confines of Neptune itself came as a shock and a surprise, we could not say. The Brain seemed incapable of registering emotions of that sort. So much for that.

For long ages the Neptunians had lived in a world where climatic conditions were variable over a considerable degree. A good deal of their existence had been spent in what was to us a feeble and depressing light. Their dome-like cities had been built mostly underground in the first instance with the idea of combatting the conditions generated by long periods of cold. When the powers of the artificial suns gave a more or less uniform climate to the greater part of the planet and life on the surface became not only possible but tolerable they found it hard to shake the customs of centuries. Also their eyes were unable to stand the strain of the new light without artificial aid. A new factor, too, had arisen to make them glad of a place of refuge underground during the long, cold nights.

The origin of the flying dragons is wrapped in mystery, to the extent that it is the subject of numberless conflicting legends. The one thing certain seems to be that they were not native to the planet itself. Our own savants who have had opportunity of examining these legends are divided in their opinions. Some hold that they may have been brought to the planet in a sort of egg-form on a meteor, and there have spawned, increased and multiplied in apparently congenial conditions. Such a thing is not unlikely. Another school of thought holds the even more disturbing theory that they were an intelligent race of Planet 9—the ancient Pluto—who found some method of crossing space and establishing a colony on Neptune.

As I have said already, much of what Gark, the Great Brain, communicated to us was unintelligible at the time, and it was only later we were able to piece together as a comprehensive whole the various items confided to us. At least we seemed to have convinced Gark of our good intentions, and satisfied him that our advent was not likely to adversely affect the people of Tex. It was intimated to us that we were free to come and go as we pleased within certain limits not then specified to us, and that in order to further communication between the two peoples we should finish learning their language as soon as possible.

With that Gark signified he was done with us for the present. The head-pieces were removed and disconnected. Almost at that instant the utterly unexpected happened.

So that we might keep in communication with the ship when we were distant from her in circumstances such as these, each man was provided with a small radio-phone, built practically on the same principle as those in our space suits. They were compact little gadgets that could be conveniently held in the palm of one's hand, though usually we wore them hidden under our jackets.

Mine at that moment gave a tiny little buzz, actually more of a prickling sensation than a sound. Simultaneously the same thing must have happened to the others. In the act of pulling out my radio-phone I saw Rifflin reach for his.

"I'll communicate," he said abruptly. "No one knows what we may start if they see us all doing the same thing simultaneously. Misunderstand our intentions . . ."

He stopped. But I already had my disk out before I grasped the purport of his order. It was so small a thing that held in my hand close to my ear it was more than half-concealed, and so I heard the message that came through. It was startling enough.

"General call," said a clear yet tiny voice right in my ear. "Return at once. Ship being . . ."

And there tantalizingly in mid-sentence the message broke off abruptly.

I looked across at Rifflin. His face had gone white and tense; in the blue light it looked absolutely ghastly.

"Something's gone wrong with the ship," he said in tones he tried desperately to hold even. "We must get out of here at once."

In an instinctive movement of protection I drew Paula closer to me.

CHAPTER XVII

Swallowed in Darkness

WE raced on through the blue-lit passages, towards the exit gate, cold fear clutching at our hearts. Our two guides, Halvus Tar and Mahbut Ahl, had never been far from us all that day; now by some species of instinct they seemed to divine the reason for our haste, and they hurried us on through the press of the dispersing crowd. Low-voiced commands broke a way for us, and

once when we were barred by some of the Neptunians who either could or would not understand that they must give way to us, Halvus Tar drew from his belt one of those odd-shaped glass rods whose function had intrigued us.

I gasped, thinking it was a ray of some sort by which he meant to blast a way through his compatriots for us. Even though the need was pressing such a course was far too callous for us, and impulsively I made to stop him. But before I could even touch his arm, his finger must have flickered on the release. There came a flash of light of such intensity that momentarily we were blinded, and those who had barred our way shrank back with a groan of fear and pain.

They were not hurt, however. We were soon to learn that the flash was relatively harmless in that it did no lasting damage. Its actual effect on eyes attuned to dim lights was a kind of temporary blindness and helplessness that passed off in a very few minutes. A kind of hood over the projector served both to concentrate the flash in the desired direction and shield the wielder of the weapon to a great extent.

Its effect on those in the direct line of fire could be gauged from our own experience. We were behind Halvus Tar and so shielded to an extent. We felt none of that momentary paralysis that was one of the results of the flash. Nevertheless our eyes were dazzled as though by some peculiarly vivid blaze of lightning; we blinked, and by contrast the blue-lit twilight about us seemed all the thicker and more profound. It took some seconds and we had covered a good many yards more before we felt ourselves normal again.

We must have made the dome exit in record time, though to us it seemed an interminable way. As we ran, Rifflin kept trying to tune in to the ship on his radiophone. He met with no success. He appeared puzzled about it. It was not merely, he said, that he could get no reply, but there was interference going on. He fancied that the interruption was of an electrical nature from the crackling in the phones, but in the absence of precise data it was impossible to say whether it was the result of accident or design.

Quite naturally we had expected to emerge into a world bright and warm-lit by the glow of the artificial suns, but the moment we came into the open air we were surprised to find ourselves plunged into a blackness blacker than the darkest night. Halvus Tar and his companion shrank back with vague cries of alarm, and gave us to understand that they had no intention of accompanying us any farther. Lacking the means to persuade them, we were obliged to let them remain behind.

It was hard to make out what was really happening. Visibility ceased abruptly a few feet away from us, yet the darkness had none of the consistency of fog. Rather was it an utter absence of all light, a definite positive rather than a negative quality. It was something akin to the blackness of space, yet solid and tangible as that could never be.

The glow of the artificial suns had either ceased for the time being or else was hidden behind the blanketing darkness. Even the steady, powerful rays of our pocket lamp carried no distance. The beams traveled a foot or so from the projectors, then snapped off as sharply and as completely as though severed by the stroke of a naked sword. As though they possessed in themselves the definite rigidity of a solid.

The profound absence of all light did not so much frighten as bewilder us. We had no idea what could have caused it or of what it portended. It might be a natural condition or might be an artificially induced one. The call from the ship seemed to indicate that it was the latter.

Stirred by I know not what thought, I cast a glance behind us in the direction of the domed city we had just left. I suppose I should have guessed, but I did not. I saw with a shock of surprise, not unmixed with terror, that it had utterly disappeared, swallowed up by the desert of darkness behind us.

"Rifflin, Whitby"—I hardly knew my own voice—"the city's no longer in sight," I managed to say.

No more than that, but what I implied was obvious. Rifflin muttered something that I did not catch. I think he was blessing me for a fool, thus to blurt out what had better not been said. For the truth was that now the city was no longer visible we had lost the one landmark that would hold us to a straight course. Of course we all had compasses, but as we had little or no idea of where Neptune's magnetic pole was situated, and anyway we had not taken the bearings of the city in relation to the *Icarus*, they were useless.

THE fact of the matter was that we were hopelessly lost. Whether the condition was anything more than temporary remained to be seen.

Rifflin came close to me. "I wouldn't say what you think in future," he said in a low voice, speaking not unkindly. "I know the temptation is almost irresistible, but just as well to keep a discovery quiet until we know exactly what its implications are. Which is not to say that you aren't to tell me anything you stumble across."

I felt myself go hot under the sting of the rebuke, well-merited though I knew it to be.

"I'm sorry . . . won't happen again," I mumbled.

"All right. Steady, men, keep in touch with each other. Don't go stringing out. There's something about this darkness I don't understand yet."

Obedient to the call we all crowded into a little knot.

Rifflin took out his compass—I think the idea that had occurred to me had also passed through his mind—and turned the beam of his pocket lamp on it. The needle was behaving most erratically. It would swing round in a half circle, hang quivering there for a second or so, then swing back in an entirely different direction. Never did it stop at the same point twice, and as the darkness seemed to thicken—if that was possible—it began literally to race right round the dial.

"Yes, I see." Rifflin spoke. "Some sort of magnetic disturbance. Probably a storm of sorts, the kind we've never heard of before. Well, I suppose it's only to be expected that conditions, meteorological and otherwise, may be radically different here from what we're used to elsewhere."

I thought to myself how they varied even over three worlds. Venus, with thunder-storms of an intensity absolutely unknown to Earth, storms during which no living thing could go out in the open and hope to survive. Rain that fell in blind sheets. Lightning that never failed to do almost unbelievable damage.

And little ruddy Mars that knew neither lightning nor thunder had its choking red dust storms that drove all life under cover, fierce storms with driving sand particles so fine that one could not feel them if one took up a handful. Yet when they were driven intensely before a gale they could tear the clothes on one to ribbons. There is a story of an Earthman caught by them who was actually skinned alive by the force of the sand-blast . . .

Knowing all this, we found ourselves wondering what diabolical variation Neptune was about to treat us to. The utter absence of any development, of anything other than the all-enshrouding darkness added a new terror to the prospect, the dread of the unknown. If only something were to happen—no matter what it was—we would at least have some idea of what we had to face.

We could go neither forward nor backward save as blind groping creatures. We had no idea where our steps were taking us. With our compasses out of action we had not even their rough guide to fall back on. We did not even know what had happened to the ship, why the radio had suddenly died in mid-sentence. Our first wild fear that she had been attacked had faded, to give place to worse, unnameable fears . . . .

The blackness about us seemed to grow more intense than ever. One felt it was becoming solid and tangible, closing in inexorably on us, until presently it would bear us to the ground and crush us flat beneath its weight. Sheer imagination perhaps, imagination stimulated by the utter strangeness of the phenomenon. Nevertheless our footsteps began to falter. We found it difficult to proceed. A tiredness and a lassitude crept over us. Even our thoughts grew sluggish.

Paula leaned heavily against me. "I'm feeling tired," she said. "I don't know what it is. Excitement, perhaps. But I could go to sleep right now. I can hardly drag one foot after another."

That was much how I felt. Only by gritting my teeth, and exerting every ounce of my will-power was I able to keep going. And the others . . . ?

Rifflin must have heard her.

"We're all like that, I think," he said. "This cursed darkness, that's what it is. We haven't come far. We can't have been walking long. A matter of a few minutes at the most, no doubt. If only we could find the ship."

He had been trying off and on to call the *Icarus* on his radio-phone, but he had met with no success. He had some idea that the blackness itself, no matter what caused it, was in some fashion composed of heavily-ionized particles that deflected and reflected the waves in all directions so that all one could get from one's own transmission was a hopeless jumble of ear-splitting sounds.

All we could think was that in some fashion we had overshot the ship or else she had taken to the air. The latter, however, was hardly likely, seeing she had called us. Her people would almost certainly know that we would make all haste to rejoin them, and would scarcely run the risk of marooning us, even temporarily, in the darkness. A third alternative, that we had been wandering round and round in a circle did occur to us, but an examination of the ground in the light of our pocket lamps failed to reveal any overlapping in our footprints.

A DULL rumble, a sound apparently muffled by distance, sounded ahead of us. There was something oddly familiar about it. We stopped, peering at each other and then before us in an attempt to pierce the gloom.

"I . . . I may be mistaken"—I think it was Whitby's voice—"but that sounded something like the ship's siren!"

"Ahead of us?" someone asked.

It was impossible to say that. The sound, dull and muffled, booming though it was, seemed to flow all around us, so that we could not say with any degree of precision from what direction it had come.

"It's some distance away, no doubt of that." This was Rifflin. "We'll just have to move cautiously and hope it keeps up. Something to guide us."

A forlorn hope, this. The sound might be coming from any direction, ahead or behind, to left or to right of us. The blanket of darkness seemed quite capable of playing queer tricks with acoustics.

"Well, move on then," Rifflin ordered. The dull booming became audible again, no nearer, no farther away. We began to shuffle ahead once more.

Someone cried out, half in fear, half in surprise. A man backed hurriedly, pressing us back.

"What's that?" Rifflin cried. "Who is it? What happened there?"

The man answered in half-apologetic tones. "I touched something, a thing hard and cold, like a wall. I don't know what it was."

"Well, we must see then . . . at once. It might be something harmful, again it may not be. We don't know all about this planet yet, not by a long way. Just here, was it?"

"Ye-es." The man moved hesitantly forward with Rifflin. The blackness seemed momentarily to swallow them up, but as we pressed forward on their heels they became visible again as wavering black entities.

"So?" That was Rifflin again. "Ah!" An odd note of surprise this, and—yes—relief. "That's what it is, eh?"

A booming sound that nearly split our ear-drums! Gods! We realized now what had happened. In the darkness, by some miracle of miracles, we had stumbled on the ship itself. What the man had touched had been the cobalt steel shell, solid and cold under his hand. Not expecting it, no wonder he had started back in uneasy astonishment. The blanket of darkness itself had so twisted and deflected the sound waves of the siren that no one could say with any degree of certainty from whence they had come. Even now, standing within hand's touch of the *Icarus*, one moment the siren seemed to be sounding behind us, the next one could have sworn it was far away ahead in the distance.

"There should be a light from somewhere, a port ready opened," Rifflin whispered. "We'll just have to grope our way along till we find it, though. Feel along the shell. Keep your eyes open, too. When we come to it there should be a patch of light visible, unless . . . "

He stopped abruptly.

"Unless what?" said a voice I recognized as Whitby's.

"We-ell, unless something—the sort of thing we don't want to think about—has happened. Just as well, perhaps, to recognize the possibility and bear it in mind."

"But the siren?" I said. Just as well, I thought, to point out the one thing in our favor he seemed to have overlooked.

"There is that, yes," he agreed, "but who is working it? It may not be any of our men at all. Or it may even be that they set the automatic machinery to work and that it is carrying on . . . no one there able to stop it. Or even troubling."

In that I thought he was pessimistic, but since it all made for extra caution I did not interrupt again.

"Come on now, we've wasted enough time. Keep close together, and have your pocket lamps and ray tubes ready."

We felt slowly along the side of the ship, straining our eyes for the patch of white light that would show us an open port. But none appeared. Presently, however, Rifflin, who was immediately ahead of me, seemed to vanish abruptly, and there came a muffled cry.

Next instant, "It's all right," said his cheery voice. "I've found the port, fell in through it, as a matter of fact. Doesn't appear to be a light about, though. Come in, all of you. Call your names as you pass so that I'll know everyone's aboard. Don't want to leave anyone behind by accident."

We did so. "Fifteen, myself sixteen," said Rifflin at the end. "That's all of us. Someone show a light, and some of the rest of you close the port. You'll have to use the manuals, I fancy. The control's electric, and may be interrupted."

The port closed behind us with a clang, and then, light-

ing our way by the thin beams of our pocket lamps, we went on through the levels, into the dark and silent ship. Only the siren boomed at regular intervals. It was operated by clockwork, and would continue giving out its aimless warning until the springs ran down.

CHAPTER XVIII

The Visitor from Beyond

THE feeling of lassitude grew on us as we progressed from one level to another. The air in the interior of the *Icarus* seemed heavier than it had been outside, as though it was charged with some chemical constituent with anesthetic properties. We found ourselves dragging, gasping . . .

"We'll have to get to the air tanks quickly," Rifflin called. "First man near one turn the stop-cocks. There's something about this I don't like."

"Captain"—it was a voice I did not recognize—"wouldn't space suits be better? As you say we don't know what this is. And there are suits available here. We can breathe without difficulty then. Letting more air into the atmosphere might only make matters worse."

"Of course. You're right. Quick now. I'm feeling faint myself."

The beams of our torches revealed the rows of emergency suits, all with their tanks filled with air cart ridges, hanging on pegs along the walls. Each seized the one nearest him, climbed into it with all haste, and then with the help of his neighbor sealed himself against the pollution of the air. And almost immediately our flagging senses began to revive.

Someone tried one of the switches that should have made the room blaze with the light from the sun storage tanks,

A spindly thing, with stick-like limbs darted from out of the shadows of the control keys . . . .

(Illustration by Paul)

but no answering radiance sprang into being. Clearly the lighting system was affected, too, by this strange black cloud.

Audiophone communication, too, was an impossibility, and for the moment it looked as though we had merely changed one state of helplessness for another. But Rifflin and Whitby were too old campaigners to be held up for more than an instant by a difficulty of that sort. The former tapped his companion, myself and one or two others near him, and beckoned us to follow.

He went off towards the control level and keeping our lights fixed on his heels for fear of losing touch we went after him. Once there he showed by signs what he wanted done.

We tried the rocket engines. They did not respond. The electrical contact that should have fired them was not working. That, no doubt, would apply to the gravity plates too. Then someone thought of the manual controls. The same idea must have occurred to anyone familiar with space ship navigation. The first thought when the operative mechanism goes dead.

The hand compressors were on the lowest level, three flights below us, but a spider ladder led straight down to them. Rifflin, moving clumsily in his space suit, began to climb down, the light of his lamp flickering a couple of rungs below the level of his feet. One man followed, and then another as they grasped the meaning of his action.

Somehow we must get out of this numbing black cloud, away from the surface of the planet, pass out of Neptune's atmosphere altogether if necessary. Only away from the malign influence could we hope to get back to normal, and discover what was wrong with the ship and what had become of the men we had left in charge.

The rigging of the hand-compressors took time. It was a slow and tedious job to our ways of thinking, used as we were to the instant shifting of the plates under the mechanical system. Actually I suppose it took something like ten minutes in all.

Slowly the plates shifted from neutral as the manual controls were brought into action. The ship quivered, and then was still, while a great weight seemed to bear us down. Then abruptly, so abruptly that it almost blinded us, came a burst of sunlight. We were amazed to hear Rifflin's voice in our audiophones.

"I think it's all right now," he said. "We're out of the area of danger. Get back to the control department, some of you. The machinery's taking up automatically, so it looks as though the worst is over. But be careful you don't take your space suits off for a while. I don't know what the air's like, and we'll have to get the regenerator fans to work to clear it first, just to be on the safe side. But the interference is over, that's one thing certain. And the next now is to search the ship and see what's become of the others."

I knew as much about the control department as anyone, I fancied, and in the absence of Yates it was my duty to go there, so calling Paula to me I began the climb back up the spider ladder. The thin metal rungs swayed and shuddered under our weight as we hastened up, but for all its lightness it was sturdily built and its quivering was a normal condition no one minded.

I found the control room empty. It was good to be in natural light again, able to see what one was doing and know that good tried machinery would respond to one's touch like a sentient thing. I steadied the ship on an even keel, cut off the gravity screens and signaled through for the engines to take up cruising speed. It was a minute or so before the response came, so I guessed that the men had had to find their way there first.

WE were still within Neptune's atmospheric envelope, but the view-plates showed the black cloud a mile or so below us, a sullen darkness like a black hole in space. I stared at it with interest. It was a perfect circle in appearance, disk-shaped rather from the point at which I viewed it, and I suppose at a guess that it was anything up to about three miles in diameter. One edge of it lapped over the domed city, cutting half of it off from view as completely as though it had been blotted out of existence.

There came a call on the communicator, a general "stand-by."

"You can remove your space suits now." It was an order from the commander. "The air's O. K. The regenerators have cleared the last of the trouble out of it. Any reports from any of the departments about the men?"

I waited anxiously. None came. Each department in turn reported there was no sign of them.

I turned to see Paula fumbling with her space suit. She had pulled the zipper of the suit itself, but the helmet was giving her trouble. It was not a thing that one could remove with any degree of ease if one was unused to it, and civilians are not drilled to the same precision as we who take to the void in ships. I helped her, then since it was the quicker way she aided me.

Oh, but it was good to breathe the sweet air again and realize that that sense of lassitude, that feeling of lethargy had vanished utterly, good to see the clear sky and the watery disk of the sun again. Good to see Paula standing at my side, and know . . .

Gods of the Airways! What was that?

Something not two feet high, a spindly thing with a thin body and stick-like limbs, with a globular head encased in a helmet of some vitreous substance, darted from out of the shadows beneath the bank of control keys, darted across the room towards the door, stumbled and fell headlong.

Paula screamed. I stared, gaped, and then leaped forward, drawing my ray-tube as I sprang. The thing tried to wriggle away from me, sprawled and lay helpless, two tiny eyes gleaming up balefully at me from the visor-plate of the helmet. I was surprised for the moment at its utter helplessness now contrasted with its activity of a moment before, then the probable meaning of it all dawned upon me.

So used was I to them that I had seen the flash of the lights above the control bank without giving them a thought, but we had just automatically changed over to our artificially adjusted Earth gravity. So slightly different from that of Neptune was it that its physical effect on us passed unnoticed, but to this puny thing the difference had been so great that it had sprawled as helpless as though bound hand and foot.

"Paula"—I spoke without taking my eyes off the prone figure, looking ridiculously like a bundle of broken sticks—"call Rifflin on the communicator. Ask him to hold normal Earth gravity until further orders, and then for him and Whitby to come here at once."

"You . . . ?" She started to ask a question, but I cut in behind the first word.

"I'm all right. But hurry. I don't want them to change over again. They might any minute if we don't warn them."

But Paula was already at the communicator, and a moment later Rifflin's voice sounded in reply.

"Why, what's wrong?" he asked in answer.

"Leave the communicator open," I called. "I think he may be able to hear me from here."

"I can. That you, Grayne? What's wrong?"

"I think I've caught one of the causes of the trouble," I called. "Paula, swing the vision-plate round a degree

or so. Rifflin will tell you when you get the focus. See it, Rifflin?"

"That bundle of sticks on the floor? Is that it? I'll come right away now."

"And bring the doctor, too," I said as an after thought. "It—he—whatever you like to call it—may be damaged by the change of gravity. We don't want it harmed, I'd say, not killed at any rate. We may want to extract some knowledge from it if we can."

What I wondered could we possibly learn from this creature that I could have picked up with one hand? Not that I looked down on it, you understand, from an intellectual as well as a physical height. But I failed to see in what way we could possibly make contact with it. The Neptunians, after all, had something in common with us. Their form was human. The articulate sounds of their language were gradually assuming a meaning to us. But this thing was more insect than man, more something fashioned out of twigs than either.

I thought of the machine by which we had communicated with Gark, the Great Brain, and wished it were possible to duplicate that on a smaller scale. But that obviously had been built up round Gark. Possibly it was to an extent a physical part of himself. Not unlikely it would work only with certain types of mentality. One, for instance, could not visualize a man by its means achieving communication with, say, an ant. The two forms of life would have no concepts in common. As in the case of this creature.

RIFFLIN, the doctor, Whitby and some of the scientists with us, half a dozen people in all, came crowding into the room. The thing was still held to the floor by the gravity pull of the *Icarus*. It was writhing a little, in pain, I fancied, until I bent down and saw for myself the baffled rage in its tiny beady eyes.

"Hm," said the doctor, staring at it, "an air breathing animal evidently. Has to wear a helmet of sorts as a protection against the cloud it and its fellows created."

"From a small planet, too," one of the astrophysicists remarked. "More probably a satellite."

"A satellite of what?" I asked. "It can't be Triton. Isn't there a chance that it may be some other form of Neptunian life?"

"No, Mr. Grayne, decidedly not," the astrophysicist returned. "The difference between the gravity pull of our two planets is slight enough. It certainly caused our Neptunian friends a little discomfort and a good deal of consternation the first time they experienced it, but it is not enough to produce the effect you see here."

"The main thing to my mind is to see what we can make of the creature," Rifflin cut in with a touch of sharpness in his voice. "Yates, Bentley, and a dozen others are missing, and surely there must be some way by which we can find out where its fellows have gone."

I had been watching the creature all along. Naturally I felt a sort of proprietary interest in it. Something struck me as odd about its footwear. A sort of dissimilarity. One could hardly call the things it wore shoes, yet they were scarcely anything else. They were made of a sort of fine woven metal, seemingly each all in one piece. That on the left foot fitted like a glove, a smooth, sleek shining contraption with odd little studs or bosses here and there.

But it was the right foot that particularly caught my attention. A portion of the metal of the tiny shoe seemed to have disappeared, but when I looked more closely I saw that a shred of it had been torn away and the mesh had fused into a dark mass that flapped idly against the side of its foot as the creature writhed. And in a flash the meaning of it came to me.

The creature was wearing anti-gravity shoes. As it had raced across the room at the moment of my discovery of its presence its tiny shoe had caught in some obstruction negligible to us; the fine mesh had ripped and the metal fused, rendering it helpless. The wonder was that the sudden vast addition of its weight had not killed it.

I explained what I had noticed and my idea of it as well as I could. There was little doubt about the matter after that. An examination showed that I was right.

Rifflin pulled the shoes off the helpless little creature, and looked them over carefully.

"I think we can fix them," he said. "In the meantime I'd suggest fixing up a room where we can adjust the pull so that it will give a normal gravity to this creature. We've got to keep him alive somehow until we're able to learn what we want to know, and I should imagine, if there's such a thing as gratitude in his small soul, that the more humanely we treat him the more amenable we'll find him. Anyone anything better to suggest?"

No one had, so Rifflin's ideas were carried out. It took a while rigging the room so that the creature would experience no discomfort, but in the course of a couple of hours it was fixed ready for him. Meanwhile others were working on the problem of the shoes. Their repair presented little difficulty from a purely technical point of view, but their very smallness made it a long and tedious job. Each little strand had to be picked up and joined carefully to its neighbor. Fortunately the metal was not, as we had feared at first, something unknown. It was merely ordinary fine wire mesh, burnished to its present color. It was only the delicate intricacy of the work that made it take so long.

ONCE in the room with conditions as near normal for it as we could make them our captive seemed to change for the better. He began by taking off the little helmet, a task he was quite capable of carrying through himself. Either he already knew that the air he breathed normally was much the same in constitution as ours, or else in the interests of comfort he was prepared to take the risk that it wasn't. Personally I think that he had already satisfied himself by some means or other that it could do him little or no harm, for obviously the helmet was meant merely to protect him against the drowsy qualities of the black cloud.

The baffled rage in the tiny eyes had passed, giving place to an insatiable curiosity. Efforts were made to speak to it, but with little or no success. It spoke itself in a sort of thin, reedy voice in which both words and inflection were lost. However, it undoubtedly possessed a high order of intelligence, for when pencil and paper were produced it understood their uses immediately. By signs it showed that it wished to use them.

When they were handed to it, the creature examined them carefully and after some initial difficulty in manipulating the pencil—it possessed only two fingers and a thumb on each hand—began to draw very rapidly and clearly. Quickly the outlines grew under the flying nimble fingers, and at last with a curious little gesture, a suggestion of triumph, as it were, the creature handed up the finished sketch.

It showed a number of our men being borne along between scores of the little people. They were not being carried, it seemed, by the creatures themselves, though the exact manner of their transportation was not clear from the sketch. Each of the little people appeared to be hold-

ing some sort of a long stick in his hand, and thus, though they were not touching our men, were able to raise them from the ground and carry them off. Not unlikely they were using some kind of a transporter beam—a thing we had already evolved in theory, though there were certain practical difficulties that prevented it being utilized on a scale large enough to make it of any more value than a mere toy.

The procession in the sketch was heading towards some object that was more of a polyhedron than a sphere. What one might call an inset to the side of the main sketch showed our men revived and inside the polyhedron. The artist had made some attempt to depict the facial expressions of his and our colleagues. The whole thing was very impressionistic, but there was no doubt from it that what he was trying to convey was that all were on terms of the greatest friendliness with each other.

That might actually be the case, yet it did not quite fit in with the behavior of the little creature when we had him trapped in the observation room. His whole attitude then—unless we had misread the indications—had been expressive of fear, baffled rage and hate, all curiously intermixed. Possibly now his intentions were to lull us into a sense of false security, so that his folk might work their will of us. Moreover, how could he know what might even then be transpiring between his people and our men? At the best he must be only guessing; at the worst he was deliberately concocting.

It was unthinkable, of course, that of his own free will he would lead us to the polyhedron. We tried to convey the suggestion to him, but either he could or would not understand. It mattered little, however, whether he refused or not. Now he had given us to understand what it was we had to look for—probably quite inadvertently, I should imagine—we would have little or no difficulty in finding it. A polyhedron of the size he had indicated, assuming he had drawn more or less to scale, could not very well remain long concealed anywhere on the landscape of Neptune. Even if they raised the artificial barrage of the dark cloud, that would merely serve to indicate just where the flyer was hidden.

Our observation men meanwhile reported that the black cloud was gradually disappearing, and at the present rate of progress would soon be gone entirely, when, no doubt, it would be safe to land again. In the interval we were to maintain altitude, at the same time keeping a sharp lookout for any indications of the polyhedron's whereabouts.

Whitby, curious to know from what particular sphere the little people hailed from, drew the conventional outlines of the solar system on a sheet of paper, and showing them to the little creature indicated that we came from Planet 3. The other understood at once, pointed to Earth, then to Whitby and the rest of us, and when Whitby nodded its face lighted up. It was a scene in many respects curiously reminiscent of our introduction to the Neptunians, though it differed in one important particular.

The little creature took the sketch in its hand, looked the planetary outlines over one by one, then handed it back with an odd gesture of helplessness that said as plainly as so many words that it came from none of the bodies marked on that rough chart.

Either he was lying then, or else—astounding thought—the little people came from some island universe far beyond the confines of our own solar system.

The idea was so staggering that for the moment we stood looking at each other like men suddenly stunned by its very magnitude.

CHAPTER XIX

A Race Through the Air

THE idea was appalling in the vastness of the conceptions it opened up. It put an entirely new complexion on the situation, and introduced a complication that was as unexpected as it was unwelcome. It threatened to thrust the object of our mission well into the background.

Our expedition had been launched in the first place with the intention of making contact with any inhabitants Neptune possessed, and behind that lay the ultimate objective of the Interplanetary Board of Control, the welding of all the intelligent peoples of our system into a federation that should work together for the common good. We would not have been surprised at the outset to have encountered hostility, misconception of our motives and a profound distrust of ourselves. These we were prepared to meet, and eventually overcome.

But even in our wildest dreams we had not visioned the possibility of an invasion, peaceful or otherwise, of our system by some extra-galactic race. Yet apparently this was much what had happened. Logically it was merely a scouting expedition, purely exploratory such as our own was. Had it been otherwise there would have been more than the one polyhedron. The concensus of evidence suggested that there was not.

Figure to yourself for the moment what the situation suggested to us. The ultimate goal of space traveling, the rate we hoped eventually to achieve, was based on the velocity of light, the speed of 186,000 miles per second. We had as yet attained nothing like that speed. We had taken five and a half weeks to reach Neptune from Earth, when light between those two planets would have taken less than that number of hours. Yet if these people came from extra-solarian space, the nearest star of which was 4.27 light years away, they must have traveled at a pace incredible to us, or else they had consumed a vast amount of time on the journey. Our imaginations strained at either solution of the problem.

But intriguing and all as that was as a matter for speculation, there was a question of more pressing urgency requiring attention. By hook or by crook our men must be released from the captivity in which presumably they were held. That, even supposing we located the polyhedron with reasonable quickness, was not likely to be an easy task. We were almost certain to meet with weapons involving principles unknown to us, just as that black cloud while obeying some had violated other laws of physics as we know them in our federation of worlds.

As I say, it was a matter about which we had to go cannily, for much as we desired to have our colleagues back with us we could not afford to run risks with the ship, and jeopardize the safety of the expedition. We owed a duty to those who had sent us in the first place. Then, too, the relations we had already established with the Neptunians must not be disturbed. If anything approaching an invasion was being mooted we, as a component part of the system to which Planet 8 belonged, had to do what we could in repelling it.

I think something like this must have run through all our minds in the moment after the full implication of the creature's gesture dawned on us. It was odd that save for one fleeting instant none of us supposed that he was deliberately deceiving us, and that he and his people came from a satellite of one of the Jovian system of planets. Perhaps it was that the almost incredible, stagger our imaginations though it did, appealed to us more than a mere commonplace explanation. Again we may have reasoned that if any such race existed anywhere in between

Neptune and Mars we would almost certainly have made contact with them, or they with us long before this.

"Black cloud practically disappeared now, sir." It was one of the men slipping in with a report for Rifflin. We had decided not to use the communicators while in the presence of the stranger. "The surface is becoming visible now."

Rifflin nodded absently. "We'll have a look for ourselves in a moment or so," he said.

He turned to Whitby. "I don't know that we'll be able to get any more information out of this mite for the time being," he remarked. "But if you think there's a chance, perhaps you and a couple of others"—he meant some of the scientist folk—"had better stop and see what can be done. The rest of us had better get back to our quarters. He's provided sufficient of a raree-show for us for one day."

He glanced round at us with a wry smile. "I can see," he said calmly, "that I'll have to tighten up discipline on this ship." But we knew from his tone that that was no more than a gentle hint for us to take our leave.

We took it. Those of us who had no business there slipped out of the room, and back to our work. Paula came with me as a matter of course. I was still a little troubled in my mind about her position on the ship. It was not always wise to have her round the observation room—what work she had to do herself did not keep her sufficiently occupied—yet I did not like the idea of her being away from me for any length of time.

I THOUGHT perhaps that the best way out of the difficulty would be to teach her navigational work. She had a quick intelligence, and though she could never hope to emulate the space-trained man she could pick up enough of it with reasonable celerity to be of considerable help to me in my calculations. I decided to put the idea up to Rifflin at the earliest opportunity.

As the lookout had warned us the black cloud had now almost entirely disappeared. It was no more than a thin transparent shimmer, and the ground below was beginning to reveal its contours once more. We were sailing at a fair altitude now, and I doubted very much whether we would be visible against the dark background of the sky, particularly as it was late afternoon, and the power of the artificial suns was already waning.

I swung the view-plate wide, increased the magnification, and swept the terrain in the hope of locating the polyhedron. I knew that in other parts of the ship others were watching eagerly also, but then that was no reason why I should not try my luck.

It was pretty bad for a while. Between the falling shades of night and the waning gleam of the artificial suns—the latter occasionally flashed up in a way that dazzled one's eyes—visibility was uncertain. More than once I was deceived by something that turned out in the end to be nothing more than a shifting shadow.

But at last near that low range of hills over which the Gongkas—the flying dragons—had disappeared the time of our first encounter with them, I managed to make out an object of unusual shape. It looked at first like a huge boulder, then as I got range on it I saw that it was a many-faceted shape, of so dull a color that it toned almost imperceptibly into the background. Had I not known what to look for and been on the alert I doubt if I would have seen it.

"General call on the communicator, Paula," I told her. "Message begins. 'Polyhedron located. Position . . .' Just a minute." I centered the cross-hairs of the view-plate on the flyer, then gave her the figures.

"Keep it in sight." It was Whitby who answered from the control-room which he had taken over in Yates' absence. "We'll make altitude above the cloud ceiling and hover for observation."

I kept the polyhedron centered in the view-plate, adjusting the mechanism as the *Icarus* lifted steeply.

The door opened. I turned my head to see Rifflin.

"What's up now?" he asked. I fancy he had caught the blare of the communicators as he came along the passage.

I told him, and he looked at it with interest.

"Not so large as I expected," he remarked, "but then they're little people. I wonder if we can take them by surprise." His brow clouded. "The trouble, though, is that we don't know what weapons they may have. We don't want to run the risk of being blasted out of existence, if we can avoid it."

That, it seemed to me from the beginning, was the problem we would have to face sooner or later. As a matter of fact it was solved for us in a rather unexpected way.

On the whole it seemed that we could take no very effective action before nightfall. Then under cover of darkness we might be able to catch the polyhedron's people off their guard. A surprise attack undoubtedly offered the best hope of success. Against this, however, had to be counted the possibility that they possessed detectors of a type that would warn them of our presence before we had a chance of doing anything at all. Our very ignorance of their scientific attainments might be our biggest handicap.

There seemed no sign of life in the vicinity of the polyhedron, though, of course, that was nothing to go by. Still one would have expected to see some sort of activity going on. The gravity shoes would remove the worst of their handicaps on the surface of the planet; they would almost certainly be anxious to spend as much time as possible in the open air after being cooped up inside the flyer while in space, and in addition they were probably unaware that they had not captured the full complement of the *Icarus*. Indeed it was hard to imagine them abandoning our ship if they had the faintest notion that there were others of us at large on Neptune, who would return and use it against them.

All along I had been watching the polyhedron more or less idly, for no sign of life showed about it, and I felt convinced that we would see none, but quite abruptly that happened which galvanized me into activity. It was not much at first sight, only a black ant-like dot moving across the land beneath us.

I stared at it for a second, wondering what it could be, before it occurred to me to use the magnification. As I made the adjustments that particular section of the planet seemed suddenly to broaden out under my eyes and leap towards me.

IT was no longer an ant-like object I saw. With something of a shock I recognized it as a man, running furiously. The effect of distance had made him look as though he were moving slowly.

"A man" I cried. "One of our fellows! Escaping!"

Rifflin whirled on me. "Where?" he demanded.

I pointed.

"Looks like Yates," he said. "We can't be sure, though."

He wasted no time in speculation, however, but turned to the communicator, and orders began to fly thick and fast. The *Icarus* began to descend, so rapidly that for the moment we were jerked about the compartment, and the sights of the view-plate swung around from their adjustment points, for I had not locked them in place.

I got them back to normal in an instant. The man I had first described was not alone now. Other figures were

streaming after him from the polyhedron. Earthmen. Their axe told me that, if nothing else. Our fellows escaping.

No sooner had I made up my mind that they were getting away scot-free than events conspired to shatter that idea.

Some of the little people came running out of the flyer in pursuit. The foremost one raised his hand in which he held a short thick tube. Whether he fired or not I can't say, for one of our fellows had turned, seen the pursuers and let drive with his heat ray. The beam struck the little man midway across his stick-like body. There was a tiny flash, a puff of smoke and he had vanished.

His fellows faltered at the sight. There came another flash and yet another from our men. Then one of the short stubby weapons of the little folk came into action. It threw an odd roundish projectile that traveled in a lazy arc, and burst into black smoke just a little behind our men. Like a pall the smoke dropped slowly down on to the ground beneath.

It was at that moment the pursuers must first have become aware of the *Icarus*. One after another they flung startled glances up at us, incontinently abandoned the pursuit and dashed back towards the polyhedron. We were dropping down now, so that I had constantly to alter my angles, and a good deal of what I saw was blurred and hazy. Nevertheless I don't think I missed very much. Our men had disappeared from my sight now. The bulk of the *Icarus* was hiding them, probably already the foremost ones were being helped aboard.

The polyhedron itself was slowly revolving, and as it moved the dull faceted sides began to gleam a little. Then before we quite realized what was happening, one after another, a dozen puffs of black smoke came from her, rolled with a sort of lazy rapidity out towards us, and in less time than it takes a man to count five had completely shut the flyer off from our sight.

From somewhere below us came a great clang, and then the ringing of bells. The *Icarus* lifted steeply. All our fellows had been taken aboard safely, and we were rising out of the region of the black cloud into the fast-falling Neptunian night.

But it seemed we were not out of trouble yet. The polyhedron, invisible to us, must have been rising, too, and the black cloud crept hungrily up after us, lapping at our heels like the waves of an angry sea.

Rifflin said something under his breath, then glanced sharply at Paula. Presumably it was something a lady was not meant to hear. Paula, however, showed no sign that she had heard. Quite possibly she had not.

"I don't want to shake that beggar off, and have him at us again," Rifflin said, half-complainingly, "and it doesn't pay to keep dodging back and forth into space. On the other hand I doubt the wisdom of fighting. It's a final argument, but not always the best." He paused, thinking.

"Perhaps I'd better have Yates up here," he said. "He may be able to tell us something. Miss Fontaine, send a communicator-call through for Mr. Yates to come up here, that, of course, is if he's fit enough."

The man himself must have been on his way to our level even then, for Paula had scarcely carried out Rifflin's orders before the door swung open, and Yates walked in. His hands, face and clothes were earth-stained, his garments torn, and he had a general air of wild disrepute about him. Actually he staggered rather than walked, like a man slightly fuddled.

Rifflin stared at him. "Sit down," he said, pointing to a chair. "What's wrong with you?"

"That hell-brew, that black smoke of theirs," Yates answered a little gaspingly. "It makes one feel . . . " He finished with a circular motion of his hand, a suggestion that his head was whirling.

"Ah! Take it easy then. But first—if you feel fit enough—tell us what we should do. Fight or run away?"

Yates grinned queerly. "Both," he said. "You'll have to do both. They'll see to that."

"But if we get out of the atmosphere? That black cloud of theirs doesn't seem operative in space."

"But they've got other weapons, things I don't rightly understand. I can't tell you all now. But . . . " He suddenly slumped forward in his chair. He had fainted. I sprang to catch him as he fell.

Rifflin gave him one look, then called through the communicator for the doctor, and asked that any others of the rescued men who were in a fit state should be sent up. A moment later the alarms were ringing the "Action stations" signal throughout the ship.

We were still above the region of the black cloud, but only the fact that we were mounting steadily kept us out of its influence. It seemed to spread through the atmosphere with incredible rapidity, or perhaps it was that the polyhedron was constantly adding to it, so that it got little or no chance to dissipate.

At the pace we were going we could not be far from the atmosphere's edge now. Every instant I expected to get the signal that we were out in space.

Of a sudden it seemed to me that it had become very dark, that night had descended with startling abruptness. Then as I looked again and swung the view-plate round on a wider angle, so as to view the sky above I saw that a black cloud had come between us and the stars. Far up above us on its outer edge was the polyhedron, its surface glowing with the friction of its swift ascent through the atmosphere. It appeared to be moving parallel to our course, and as it went, ever and anon another lazy puff of smoke rolled out from it to join the trailing cloud behind it. We were caught between two fires, between the cloud mounting from below and the black screen from above dropping down on us like a blanket.

Those in the control tower must have seen it simultaneously. The *Icarus* suddenly altered her course. Instead of continuing to rise on a long slant she flattened out, and her engines began to roar as we thundered off in an effort to escape from the threatened danger above and below us.

But to our amazement—one must admit a hint of terror in it—the polyhedron held even pace with us. The shell of the *Icarus* was beginning to warm up with the heat of our passage through the air—in a little while it would become almost unbearable—but the polyhedron still sailed on serenely and effortlessly. And all the while, above, below and behind the black cloud thickened and closed inexorably in on us, like the steel jaws of a trap that would presently meet and snuff us out of existence.

CHAPTER XX

The Return of the Gongkas

ON and on we sped, the black cloud creeping up from below, another black cloud drifting down on us from above. A little ahead and perhaps half a mile or so above us the polyhedron rolled steadily on her way. She had the speed of us; by keeping her position constant she was able to prevent us from making a sudden break up through the atmosphere and out into space and safety.

It was no pleasant prospect that faced us. This unequal race could not last forever.

Rifflin passed his hand across his forehead. "I'm tempted to attack as the easiest way out of it," he said. "After

all, I suppose it's a case of self-preservation, much as I'm against wholesale slaughter. If we attack we'll have to kill. We can't take half measures. We've no weapons that will put them temporarily out of action."

That was the crux of the matter. These little folk, with their black smoke, could force us down, paralyze our machinery, and render us helpless, all without doing us any lasting harm. Whether they meant to do us any harm at all other than what might result from the mere fact of our possible capture was decidedly a moot point.

Yates had showed signs of coming round by this; Bentley and some of the rest of the rescued men had arrived and between them were able to give us a sketchy account of the little folk. The attack had come down with such abruptness that it was over and done with it almost before they had time to realize what actually was happening.

Apparently no one noticed the arrival of the polyhedron in the upper atmosphere. The first intimation that anything was wrong came with the advent of the black cloud. Yates had taken it for some manifestation, though a peculiar one, of Neptunian nature, and had radioed us to return in the belief that the ship was likely to be caught in a magnetic storm of unusual severity. As an extra measure of precaution the clockwork machinery of the siren was set going at the same time.

Apparently the rest of the machinery and the consciousness of those on board had ceased to function almost simultaneously, and they came back to life to find themselves captives in the polyhedron. They were bound with fairly light but strong chains of metal, and at first it looked as though only a miracle could effect their release. But presently Yates and some of the others began to experience a queer sense of lightness and power—as they reasoned it out later the gravity pull of the polyhedron was probably adjusted to that of its own small and peculiar world—and this with the increase of muscular quality it brought put an idea into Yates' head.

Either they had not been searched while unconscious, or if so their pencil heat-rays—so called because they were scarcely larger than an ordinary pencil—had been regarded as harmless. Another suggestion, probably closer to the truth, is that the ray as a lethal weapon was unknown to the little people. At any rate the ray tubes had not been taken away.

Yates quickly determined that the metal bonds could be snapped quite easily. He told his companions, and outlined his plan. Some of the little folk were passing in and out most of the time, but seemingly they saw nothing suspicious in the conversation that was going on, possibly no more than the keeper in a Zoo would take any notice of the constant twittering of birds in the aviary. Perhaps we were an alien creation to them, and one they regarded as being on a lower level of intelligence.

However, to make a long story short, at a given signal our fellows broke their bonds, struck down one or two of the little folk who made some attempt to oppose them, made their way to the open outer port, and to freedom. It was just a slice of luck that we managed to come up with and rescue them before the pursuit became general.

All this they told us as compactly and briefly as they could, but it threw little light on the mentality of the creatures opposed to us. Actually we had learned far more from our own captive, who, whether by accident or design, had been left behind on the *Icarus*.

The only thing that emerged with any degree of certainty was what we had already deduced ourselves, the fact that either they possessed no actual lethal weapons or else were reluctant to use them except in case of dire necessity. Still, from the way we were being gradually forced down, it looked as though the decision would be thrust on us in a very few minutes.

It was a situation where the mind must be made up quickly, and the decision once reached could hardly be altered. I think it was the knowledge of that that held Rifflin back till the last possible second. The surprising thing about the polyhedron itself was that the black cloud, while it spread in all other directions, did not seem to be surrounding the flyer. Then, too, a closer study of the machine itself seemed to show that it was, if one can so put it, rotating on its axis at a fairly rapid rate, a movement additional to its forward progress. The obvious deduction was that the shell and the interior of the polyhedron were built separately, and that the inner was kept steady by some sort of gyroscopic arrangement, while the outer portion while spinning contrived somehow to create a vacuum in the air about it. This would at one and the same time do away with a good deal of the trouble incidental to atmospheric friction and create a fairly effective barrier between the black cloud and the flyer.

"THAT'S what it seems to be," was Rifflin's comment when someone suggested it. "At any rate we've to get out of here somehow, so I think I'll take the risk and heat them up."

The ray projectors were already manned for emergency, and Rifflin ordered they be trained on the polyhedron with gradually increasing power. We had no wish to volatilize the little people instantly as long as there might be some other way of bringing them to terms.

In the dark of the Neptunian night our search beam reached out and caught the polyhedron, outlining her against the black background of the sky. At the same instant a weak power heat ray struck her. The dull surface of the shell warmed up, passed through gradations of color, and finally held at a cherry red.

The spinning ceased. Perhaps it was only the effect of the light, but the polyhedron seemed to rock a little from side to side, like a ship buffeted by the waves. Then with an abrupt spurt it tried to pass beyond the area of influence. But here for once was a case where superior speed counted for little. Our beam was a broad angle one; its range was effective to a surprising distance, and as long as we kept her in sight we were able to train the ray on her. The one hope of safety for her people lay in flight out into space, where with her superior speed she could put a vast distance between us. But for some unaccountable reason her people seemed unwilling to take this course.

Instead she did something we had not anticipated. She dropped abruptly from her former level, sinking down below us, and for the moment our ray played uselessly across the atmosphere. But in another instant it had snapped off, and the projector underneath our hull was swinging round to train on the polyhedron. More black smoke was trailing us now. With the polyhedron below and ahead of us the situation from our point of view was becoming worse.

"Notch it up as high as it'll go," Rifflin ordered suddenly as the ray dipped down toward the polyhedron. "Heat them up white."

But the polyhedron was dodging and twisting now. There was less hope of focussing the ray on her. Also she was taking advantage of the cloud formations in a way that hid her from our sight more often than not. Our great fear was that in her twistings and turnings, with her superior speed, she might succeed in eluding us altogether, make altitude and reach the ceiling before we were aware of the turn of events.

Actually, from what subsequently happened, I doubt if her people had any such intention. She seemed at first

merely content to dodge our ray, though she could have escaped us altogether if she wished. Occasionally we caught glimpses of her as the ray focussed for a moment before she twisted out of its path. Then abruptly a new weapon came into play.

Our detector hissed a warning note, such a sound as it would give were we in space and a meteorite should swing into the area of influence. But there should be no meteorites here within the atmosphere, none at least large enough to have occasioned this sort of disturbance.

It all happened very quickly.

The white beam of our searchlight, streaming across the clouds, momentarily lighted on some hurtling black object, hissing toward us, and at the same instant our repeller rays came into action. The black object was thrown completely out of its path, and sent sailing off at a tangent. A second later it seemed abruptly to disintegrate. A bright violet light, blinding in its intensity, flared out from it in all directions as it exploded; the muffled sound of a dull roar came to our ears, and the *Icarus* rocked uneasily.

What precise action the projectile was meant to have, whether it was a new and violent explosive, or merely another of those paralyzing weapons in which the little folk seemed to specialize, we could not say. It had exploded in mid-air, and it had done us no harm. That was all that seemingly mattered now. We had had our warning. The next one could not take us unawares.

It nearly did. But for the fact that our repeller rays were still in action we might have been annihilated. The projectiles began bursting round us, seeming to come from

Other figures streamed from the polyhedron—Earthmen. Some of the little people came running in pursuit.

(Illustration by Paul)

all points of the compass at once. Evidently there was no need to fire them direct at their objective. They must have possessed some kind of automotive steering apparatus by which they could be set for any desired course, and, if desirable, overtake the foe from the rear or the sides.

More through our good luck than anything else they did no more than provide us with a highly-exciting pyrotechnic display. At the same time they taught us the need of caution and the fact that we could not afford to underrate the enemy's capacity for harm.

NONE the less the encounter looked as though it would end in a stalemate. The polyhedron was proving far too elusive for us to come to grips with it, and the only decisive note in the whole affair was furnished by the possibility that we might sooner or later blunder into the black cloud. The people on the flyer were not fools, and one could feel almost certain that as they dodged about they would keep up a barrage of the smoke-like substance.

So far we had managed, more through good luck than anything else, to elude it, but we could not go on forever in that fashion. We were just thinking seriously of staking all on one wild drive for space, trusting to our pace to break through the atmosphere and any part of the black cloud we touched before it could do us serious harm, when of a sudden the whole aspect of the abortive conflict incontinently changed.

Our searchlights now going full blast, mainly for our own safety's sake, abruptly lighted on the polyhedron. It was streaking in our direction, no longer spinning, but apparently headed in full flight. The sight stunned us for a moment. It looked so like some manoeuvre meant to catch us off our guard. Then we saw . . . .

Great flapping shapes dropping from nowhere out of the night were clustering about the polyhedron, bearing down on it, seeming almost as though by sheer weight of numbers they were forcing it to earth. The violet flares were bursting in their midst, and more than one of the beasts went toppling down through the clouds. But as fast as one fell a dozen others seemed to take its place. Momentarily they shut off the polyhedron from our sight. They were turning it over and over in the air as a child will roll a hoop. Remember it was small compared with the *Icarus;* it was not smooth and streamlined, but rough and many-faceted, and there were projections where the claws of the flying dragons could find a hold, and their steel-like beaks could get a purchase.

I think our hesitation was for the moment only. After all the little people were nearer human than the Gongkas—the flying dragons—and in an instant we forgot our own grievance against them, and went to the rescue. We had found one means of dealing with them, a method the little people did not possess, and now we used it.

Wherever a vast stretch of leathery wing showed for an instant our heat ray flickered, and the great beast went toppling from the heights. We struck so suddenly and so unexpectedly that we had well-nigh decimated their ranks before they became aware that a new factor had irrupted on to the scene. Then, however, they turned their attention to us. Which is not to say that they entirely abandoned their attack on the polyhedron. They did nothing of the sort. Only now they had two foes instead of one.

Once we blundered into a wisp of the black cloud, and for one dreadful instant we staggered, and we thought we were going to crash. But our impetus carried us through it, and the next instant we breathed freely again.

The Gongkas, however, were still fluttering all about us. Many of them had succumbed to the anesthetizing quality of the cloud, and had crashed to their deaths, but their numbers seemed without end, blanketing us so that the end now looked as though it were only a matter of time. The polyhedron seemed to be getting by far the worst of it. It was spinning down far below us, dropping in a way that suggested it was temporarily out of control.

Paula caught my arm. I thought the horror of the affair was making her feel faint, and I turned with concern in my face. But it was something else.

"Phil"—her voice was no more than a whisper—"we use the repeller rays on a meteorite. Why, oh, why can't we use them on these things and hurl them out into space?"

I could have told her that it was a question of power, none the less there was more than a grain of sense in her suggestion.

"Rifflin"—I touched him on the shoulder—"Miss Fontaine has suggested that perhaps we might, with the repeller rays, be able to deal with those things. Do you think there's anything in it?"

He looked startled for the moment. We used the repellers so exclusively for meteoric bodies that I don't think anyone had ever troubled to suspect another use for them. He seemed dubious.

"It's all more or less a question of power," he said, then he appeared to pull himself together. "It's worth trying, anyway. If we can get a concentrated force—"

"One at a time," I suggested. "Of course we can't hurl the whole mass of them out in the one lump. But even with our heat ray we can't tackle more than one dragon at a time."

He nodded. "I'll see. We might have luck with us after all."

I realized what was troubling him, and hurriedly I explained to Paula the possible flaw in her plan. Out in space conditions were different. A meteorite was a moving body, one hurtling along at a considerable pace, and the merest expenditure of force was sufficient to deflect it from its path, and send it off at a tangent. The merest flick, so to speak, was enough to alter its orbit. Then, too, there was no atmospheric friction to take into account.

HERE we were dealing with bodies that for all practical purposes of comparison were at rest. They required a definite force, and a constant pressure to move them. They could oppose resistance, they could move out of the area of influence . . . . Numberless other considerations entered into calculation.

Paula looked crestfallen when I finished explaining. I think she wished she had not made the suggestion in the first place. However . . . .

The repeller ray, an invisible beam of force, reached out. It was nicely aimed, concentrated into a small pencil-like ray, instead of spreading fan-shaped as was usual. It caught one Gongka fair and square in the middle. In the light of our searchlight we saw him stagger; his outlines appeared to flicker, and then abruptly he was a vanishing dark speck rushing towards the zenith. It had worked with one. We had caught him unawares, shot him out into the frigid space before he had a chance of recovering himself.

Another gap appeared in the blanket of flying bodies overhead, then another and another. It looked too easy. It was. As though aware that something had gone wrong the flying dragons massed closer together, poised in their flight and with giant wings lazily flapping appeared to be speculating on this new menace.

The ray caught the mass of bodies in the center. They rocked a little, but the pressure of the numbers descending on them from above drove them down a little against the force of our ray. There were little gaps between.

Probably a good deal of the pressure exerted by us was being dissipated through them.

The ray was concentrated, extra force put into it. The flight of Gongkas split up, probably of their own accord. A gap appeared in the sky above their ranks. The ray caught one of the bulks squarely at a moment when none of its companions was immediately above it. It vanished abruptly into the infinite, passing beyond the range of our vision.

Now they were dropping silently down level with us. As they turned and wheeled the ray followed them. Its effect on their massed ranks was not so great. But there was still the heat ray. We had kept that going all the time, and it had accounted for a few.

As they moved, as our repeller ray swung round to follow them something happened that I still can picture as vividly as the night I saw it. By some species of mischance one flying dragon was slightly higher than his fellows. His body was hidden by the mass of their bodies, but his immense beaked head projected over the heads of the others. The repeller ray caught him squarely in the neck.

We gasped as we saw the great head torn ruthlesaly from its columnar neck, and its scattered atoms strewn across the face of the stars . . . . The huge body went wheeling lazily downward.

Perhaps the Gongkas possessed more intelligence than we had credited them with, enough at least to realize what had happened. The sheer nastiness of it held us spell-bound for a fraction of time too small to measure by any accepted standards. Yet when we looked again the sky was clearing and the dragons were in full flight, heading as they had done before, towards their eyrie in the north.

We looked around. The circle of the horizon swept by our searchlight's beam was rapidly clearing, the black cloud itself was thinning down to harmlessness, and the dragons themselves were no more than black specks dwindling away in the distance.

It was then we thought of the polyhedron, and the little people in it. Some time elapsed before we managed to locate it.

It had crashed. There was no doubt of that, for in the light of the searchlight's glare a gaping hole showed in its side, and machinery . . . and other things . . . were strewn about the ground around it. Yet it did not look as though all its people were dead. We seemed to see movement going on.

A sudden compassion for them welled up in our hearts. They could hardly harm us now, and they might need succour.

Slowly on an even keel we settled down, the great white beams of our lights throwing every item of the scene up in strong relief.

CHAPTER XXI

The Plant Men

THE *Icarus* came slowly to rest an even hundred yards or so away from the stricken flyer, and we made ready a landing party to investigate. The white beam of our light was still focussed on the wreck, and every detail stood out against the black background of the night. Many of the little people, horribly and grotesquely smashed, lay strewn about the ground, but there were others we could see, moving about and probing amongst the wreckage.

They seemed listless and apathetic as though the fight had gone out of them. Perhaps the magnitude of the disaster that had overtaken them would have accounted for that. The situation must have appeared appalling to them, to be marooned without hope of success—if our guess was correct—light years away from their own system.

Add to that, the turn of events had left them helpless, at the mercy—as no doubt they believed—of this strange ship whose men they had attacked but such a short while ago. Whether they realized we, too, were aliens on Neptune or not, of course I cannot say. The chances were that our captive was the only one of them who had the faintest idea that we were not native to the planet.

It was not my luck to go with the landing party. That, this time, was forbidden me, but I was able from the observation room to see most of what went on, and what little escaped me I learned later.

As a measure of precaution we kept our armament trained on them. We did not think they would start anything now, nevertheless we did not feel inclined to take the risk.

Actually the landing party approached almost within hand's touch of them before any notice was taken of them. The curious paralysis that had come over the little people seemed to affect even their minds. It was obvious that some of them were aware of our men, but they merely stood and stared with an incuriousness that had its disconcerting side. We would have feared a trap of some sort had it not been so evident that the fierce white beam of our searchlight was in itself partly responsible for their lassitude. It appeared to fix and fascinate them.

They had ignored their dead. They had made no attempt to attend to their wounded. Their whole attention had been fixed on ascertaining the damage done to the polyhedron. When they discovered that as far as they were concerned it was irreparable they had sunk into despair.

Our men automatically divided themselves into two parties. One went to work among the dead and dying on the ground, while the others covered them with their ray tubes. A mere matter of precaution again that might or might not be necessary.

The injured were few, half a dozen in all. Wounds, fractures, broken limbs and such-like. So much was evident on cursory inspection. Apparently these strange creatures had no flesh in the accepted sense of the word, nothing that could bruise . . . . Where there were fractures or even clean breaks the limb had invariably snapped right across, held together merely by a sort of thin ligament. From the gash a kind of green liquid, rather thick and not very much of it, exuded slowly. Take a green twig, snap it across without actually breaking it into two separate pieces, and watch the green sap ooze out, and you have some idea of what their wounds looked like.

The sight confirmed the suspicion that had been growing in everyone's mind from the time I had first captured the little creature in the observation room. They were not human beings like ourselves, not creatures of flesh and blood. They were . . . plant men! On that strange and distant planet where their home was, the dominant intelligence had developed from the vegetable kingdom.

I saw some of the wounded brought in; heard a good deal of what our fellows had to say about them, and had a chance of seeing more for myself. At first I think our dominant emotion was an odd sort of revulsion at the recognition that they had no kinship with us in the way most flesh and blood creatures had. But that speedily passed. As in the case of our captive their appearance had a good deal to do with overcoming that first involuntary shrinking when the truth was made known. The fact that their limbs partook more of the nature of dried twigs than anything else no doubt had a lot to do with

that. They were at worst in appearance grotesque yet not unlikeable caricatures of the human form. Had they been a more pulpy vegetable form our reactions might have been altogether different in the long run.

A rough exploration of their bodies gave the doctor grounds for believing that they could be treated much along the same lines as human beings, but until we had learned a little more about their nervous systems and the particular chemical constituents of their sap-like blood he decided it was better not risk anything in the nature of injections. For the same reason we made no attempt to give them food or drink of any sort. It was quite likely that what we found nourishing might be the rankest of poison to them. The question itself was solved some little time later, however, when our original captive, his gravity shoes now fixed, was brought in to see some of our fellows at their meals in the hope that we might find out what sort of menu was most suitable for him. A selection of everything we had in the eating and drinking line was placed before him.

PRACTICALLY all the solid food he viewed with disfavor. The liquids or semi-liquids excited his interest, though he passed most of them up. Such things as tea and coffee he hesitated over, finally coming back to the tea. He tasted some, sipped a little more, then drank up the rest, though without any great appearance of relish.

Someone in a moment of inspiration thought of giving him some water, arguing that since he had concentrated on liquids and he was indubitably a plant man water was almost certain to be his natural form of nutriment.

He took the vessel, holding it awkwardly between the two fingers and thumb of one hand, looked at it as if uncertain what it was, then set the vessel down and deliberately dipped one finger in the water. He drew it out quickly, and looked up at the men with odd, searching eyes. Plainly he had something he wanted to make us understand, and was at a loss how to proceed.

His glance swept the table. Abruptly he indicated the teapot, and signed that he wanted it. But when it was passed to him he merely felt the outside of it, then felt the outside of the vessel containing water, and made some gestures whose meaning was not very plain. But an idea came to one of the watchers.

"I think I see what he means," he said. "He's trying to tell us that the water isn't the right temperature. He wants it made as warm as the tea. Try it tepid. We don't want to scald the little chap."

The guess was correct enough. The plant man took the warmed water, drank it with avidity and signed for more. Altogether he drank about a gallon of it before he decided to call it a meal.

When the wounded had been attended to, our attention was turned to the rest of the plant men who were unharmed. For safety's sake the guard had been maintained over them from the start, but they had given no trouble, indeed they accepted everything we did with the same utter lack of interest that had characterized their expressions from the moment we had landed in the midst of them.

The worst disaster of all, the destruction of their ship, had evidently left them in the condition of mind where no subsequent catastrophe had power to disturb them further. Rather remarkably in contrast to their demeanor was the behavior of our original captive. He had established a point of contact with us, and, allowing for the barriers interposed by the absence of a common language, he had got on a decidedly friendly footing with our fellows. Still, even though he seemed harmless, orders went out that a close eye was to be kept on his movements and under no circumstances was he to be allowed near either the observation or control rooms.

My turn came later when the last of the plant humanity had been removed from the vicinity of the polyhedron. Yates was now practically his own man again, and he and I were detailed with such assistants as we wished to select to make an examination of the polyhedron. We turned our attention first of all to the superficial damage. This was not strictly my department; my knowledge of the mechanics of a space ship officially began and ended with the navigational part of it; but stray hints never come amiss in our game, and I am not above learning all I can. Yates and one of the engineers went thoroughly over the shell in their best professional manner, and at the end declared that they believed she could be made space-worthy again without much difficulty.

An area, of roughly about one-eighth of her total surface, had been torn off the outer shell, revealing the vacuum space beneath and the inner skin had been punctured. We had the necessary apparatus on board to weld up the holes, and if we were obliged to we could probably fall back on the resources of the planet. The metal itself alone might present a difficulty. At a glance it seemed to come under no heading of which we were aware; it was no metal known to the mechanics of three planets, and it remained to be seen whether it would amalgamate successfully with the repair plates we carried.

Under test it appeared to be of considerable toughness, with a density slightly higher than that of aluminum. A light metal. The peculiar feature of it was that while it resisted direct blows of tremendous force—we tried it later with the hammers and they rebounded from the surface—a thin sharp pointed instrument like a knife or, for instance, the claws and beaks of the Gongkas, was capable of holing it. But let me say here that a single slash was not sufficient to do this. It required repeated stabs in the one particular spot before the hole was made, but once that was done it could be torn in strips with comparative ease.

We imagined that the repeated onslaughts of the Gongkas had at last made an opening in the wall of the shell; beaks and claws had enlarged this to a very considerable extent, and ultimately the weight of the flying creatures dragging on the lower lip of the puncture had torn this great piece out. The damage could hardly have been caused by the crash, though some of the machinery and the injured plant men had been thrown by the force of the impact through the hole in the inner wall onto the ground outside.

A careful search of the interior of the polyhedron failed to reveal any repair sheets, and we were forced to conclude that either the vessel carried none or else had used them all up in the earlier part of the voyage. We were rather hasty in jumping to this conclusion as we found out later on.

THE driving system seemed on the face of it to present certain difficulties. We had looked first of all for something analagous to the system used on the Inner Planets' runs, actually a combination of rocket engines and gravity screens, but we could see nothing that by any stretch of imagination even faintly suggested such methods. The room we took to be a sort of combination of control- and engine-room merely contained in the way of machinery an instrument something like an overgrown typewriter.

It was obvious at least that the driving force originated from here and we set about tracking the leads. And presently we became aware that from the base of the typewriter affair there radiated a perfect maze of tubes, thin rod-like things that at certain intervals ran through the

inner skin of the ship and terminated flush with the outer shell. Here the mouths of the tubes were covered with a quartz-like semi-transparent substance of great strength, set flush in the outer skin, though something about their shape suggested the bull's-eye glasses on our pocket torches and made me think that their essential purpose was purely a focal one.

And at that an idea came to me, one that with a little more luck I might have visualized before.

"Yates," I said. I caught him by the arm. "Their power . . . "

He wheeled on me. "Have you solved it, Grayne?" An odd smile flickered about the corners of his mouth. He lacked the essential information that was mine, no doubt, but then some of the others, the engineer amongst them, should have guessed it.

"I don't know," I said frankly. "I'm making a suggestion for what it is worth." And then I told him about the transporter beams on which he and his unconscious colleagues had been carried. "Only," I ended, "you weren't carried in the strict sense of the word. They had the repulsive qualities of the beams gauged to a nicety. Your body was the repulsive point common to two or more beams, you see."

He nodded, quick to grasp my lame explanation. "And if one of the beams had snapped off suddenly leaving the other on," he commented wryly, "I'd have been shot away like a bullet from a rifle."

"Something of the sort," I agreed.

"I think you're probably right. They balanced us nicely between the opposing points of the two rays. Now, you ask why shouldn't that system of repelling rays be their method of propulsion? Isn't that it?"

"Exactly," I told him. "I know what you're going to say, that the force required must be tremendous. But we don't know. It may be that they can graduate it until they are outside the atmospheric envelope, and then can give themselves such a tremendous kick-off that . . . "

"That they go on sailing serenely away at velocity until they decided to brake their passage," he cut in. "I should say you're as near to it as any of us are likely to get. In fact the bosses on this quartz-like stuff on the ends of the tubes remind me of the things they all seemed to be carrying about with them. Like canes with a bull's-eye on the end. The queer thing is that having discovered a ray of this sort, they didn't go further and stumble on the secret of the heat ray and one or two others we know of. But it seems they didn't. We'll take it then that this is their means of locomotion. Everything seems to answer to it, except one thing. I can't see where they generated their power. I'd have expected to find something in the nature of a full-sized generator here . . . and there isn't."

"It may be a sort of chemical action," said the engineer. "I've always thought the generator was rather cumbersome myself. With a handful of chemicals now . . . "

He finished with expressive gestures.

But his suggestion set us hunting round for something in the nature of chemicals, partly with an eye to business and partly in the hope that we might make some new discoveries that would ultimately benefit the confederated planets. We struck several compartments that would have answered pretty well for laboratories, and most of them had stores of chemicals of various kinds, but they were all substances more or less well known to us, and so we passed them for closer examination later on by more qualified men, just in case they might have uses or properties not commonly attributed to them on the Inner Planets.

But some time later, just as the grey dawn was breaking bleakly in the dull Neptunian sky, we found a storeroom of sorts down towards what was at present the bottom of the polyhedron. It was built right into the inner skin, a compartment glass-lined on all six sides. A number of small, long-necked bottles, reminding us irresistibly of Dewar bulbs, had once stood in a row in racks against the wall. The racks, apparently, had been devised to keep them from shifting and pitching with the movement of the polyhedron, but they had not survived the impact when the flyer hit the surface of Neptune. All of the bottles seemed to have been thrown to the floor; all were cracked and broken, and their contents seemingly had vanished.

"I say"—Yates had struck his foot against something—"this looks like—yes, it is—a sheet of that stuff out of which the outer shell is made."

He bent and tried to pick it up, but it resisted all his efforts. Presumably it had become stuck to the floor.

It was dark enough here, and we jetted the lights of the lamps from one corner to the other, looking about us. The rack framework had half fallen when it spilled the bottles out, but one end still hung from the wall, and formed an angle with it. It was there, jammed between the wall and the framework, that we found a bottle intact.

Yates lifted the bottle up and examined it curiously. A small screw stopper, made of some substance similar to vulcanite, sealed the orifice of the neck.

He gave the stopper a twist. It moved easily enough, so in a spasm of curiosity he unscrewed it further. It came out with a popping sound. Yates gave a cry and nearly dropped the bottle.

What happened was simple enough. The moment the stopper was removed, or rather the instant the air got to it, the liquid in the bottle began to froth and bubble out in a thin stream, spreading rapidly across the floor before our eyes. There it hardened almost at once into a thin sheet of the very look and consistency of the metal that formed the polyhedron's shell.

Yates flicked at a scrap of the stuff that had stuck to his finger and it came away bringing a piece of skin with it.

"Cold metal," he said as though talking to himself. "Metal in a liquid, molten state yet cold. Can you imagine that, Grayne?"

"I don't need to imagine that," I said dryly. "I've seen it for myself. Still it seems to be a queer metal that can be kept liquid in a Dewar bulb, but that sets almost as soon as it is exposed to the air."

Yates fingered his chin thoughtfully. "Not almost instantly," he corrected. "You saw that it spread and ran a good deal before it hardened. My own feeling is that those bottles are a sort of vacuum flask. The metal is poured into them in a molten state, though it must have an exceedingly low melting point; they keep it at the requisite temperature, and, of course it hardens on exposure to the air after it has a chance to cool off, which it does very quickly. Still, seeing this"—he gestured towards the broken bottles—"it's easy to understand how those little fellows completely lost heart. They couldn't have seen any way of repairing the flyer. That must have been it, for they were plenty full of pep while we were in their hands."

"Yates," I said—the engineer was not listening at the moment—"what's the idea about this? Apart from learning all we can about the flyer, I mean. Seems to me that the question of repairing the polyhedron and making her navigable again has something to do with our instructions."

He nodded. "You're quite right. We can't do much here, with these plant men, I mean. The idea is to re-

pair their flyer if possible, put in a prize crew and navigate her and her old crew back to Earth in our company. After that it's up to our scientists to make what they can out of things. But we can't waste time talking now. My work's nearly over, yours is beginning. Potter round and see what you can make of things while I have a look over that gyroscope arrangement that seems to control the spinning of the outer shell."

As a matter of fact I found little of interest in my particular department. The utter absence of all space charts convinced me that this was purely a first exploratory expedition into a system whose component planets were unknown to the polyhedron's people. I, however, unearthed a number of volumes of thin metal sheets, engraved back and front with cabalistic characters that conveyed nothing to me. I could not even say whether they corresponded to our logarithm tables by which we made our calculations, or merely formed part of the ship's library. Seeing that I found them in the observation room though the latter conclusion seemed the less likely of the two.

THE metal of which the leaves were made intrigued me. I was sure it was metal simply because when I accidentally dropped one of the volumes it made a clanging sound, though to the touch the pages felt like featherweight paper. Well, they weren't for me to worry over. Greater minds than mine could exercise their talents on them when we returned to Earth.

Beyond that there was nothing other than I would have expected to find in such a place. Many of the instruments had unfamiliar shapes and worked in unfamiliar ways, but there were none whose principles did not become apparent after a few minutes' experimentation. I had been in hopes of lighting on something new in that line, but apparently in some respects the plant men had progressed no further than we.

Yates had finished his investigations about the same time as I, and the glow of the artificial suns was already brightening the new day when we made our way back to the *Icarus*. It struck me then how completely the advent of this stranger race from the outer regions of space had pushed into the background the main object of our expedition. The peaceful indolent Neptunians had ceased almost to have any significance, and whatever conflict the exploitation of this sparsely populated planet dragged us into in the future it was not likely it would be with the present inhabitants. If ever we crossed swords with anyone it was not improbable it would be with this queer race of beings. They were not merely alien in thought, word and deed, but amazingly enough were not even creatures of flesh and blood.

But before that came about I hoped that Paula and I would be back on Earth, or more probably settled somewhere on one of the other Inner Planets. You see, I somehow dreaded the wrath of Jens Fontaine, her father, and felt that for a time at least on our return we would do well to keep outside the circle of his influence. If he took it into his head to disapprove of our alliance, I doubted whether even the Council would be powerful enough to protect me. The main question in my mind was whether they would consider me worth protecting. Somehow I felt not.

CHAPTER XXII

The Wonder Metal

OUR headlong career of the previous night had taken us a considerable distance away from our base, and dropped us in what was by comparison wild and desolate country. For a number of reasons we were anxious to get back to the domed city as soon as possible, not the least of which was that such repair work as we wished to do on the polyhedron could not be readily undertaken where we were.

On the receipt of our reports Rifflin decided to return at once to the base. The polyhedron itself could be navigated under its own power as long as we remained inside the limits of the atmosphere, though until we found some way of making it air- and temperature-tight we dare not take it out into space.

The repulsive ray system under which the polyhedron worked baffled us for some time in the absence of anything in the nature of a generator, but an overhaul of the various tubes connected with it revealed traces of chemicals that were readily identifiable under analysis. Quantities of these still remained in the jars in the laboratory, and the right mixture was purely a matter of experiment. Even with so much to guide us it was a matter of two days before we were ready to leave. At last, however, all was ready and the two flyers took the air together, heading southwest towards the domed city.

The polyhedron was quite air-worthy, though she had a tendency to wobble a bit, and it was impossible to get up any considerable speed without running the risk of being shot out into space. Hence we took two or three times as long reaching our objective as we otherwise would have done.

It was late in the afternoon of that day when we dropped down again on our original landing ground, and we were almost instantly surrounded by a crowd of eager, clamoring Neptunians, foremost amongst whom were our old friends Halvus Tar and Mahbut Ahl. From the moment they had seen us vanish in the blackness of the artificial fog that fateful afternoon they had given us up for lost. Frankly they never expected to see us again.

As well as we could we explained what had happened, and exhibited the polyhedron and the plant men as evidence of the truth of our tale. We need not have feared that they would be sceptical, however. They were only too ready to believe us. Rather to our surprise they appeared not altogether unacquainted with the plant men, and, presently, for we still found considerable difficulty with the Neptunian tongue, we gathered that this was not the first occasion on which such visitors had appeared on the planet.

That was news to us. Hitherto we had imagined that we were the first space-voyagers to reach here. Try as we would, however, we could not extract from them details of this last visitation. Evidently it was something they regarded with horror, a memory that they would willingly forget. That struck us as queer, for the plant men, once the initial antagonism between our two parties had disappeared, seemed to be quiet, genial, likeable little people. But apparently they had done something—if indeed it was the plant men themselves and not some other race with whom the Neptunians were confusing them—on the occasion of the last visit that had caused their advent to linger in the memories of our hosts.

Beyond the tacit admission that they had seen similar beings before and a certain marked aversion they displayed towards the plant men we could extract no information of value from our Neptunian friends. We did not even know whether the visit was one of comparatively recent date or something far back in their world's history.

We met with no better luck where Gark was concerned. We had hoped that through the medium of those mechanical adjuncts to the Great Brain we might have been able to communicate with the plant men and learn something more about them. But Gark first of all displayed a very pronounced reluctance to have anything at all to do with

them. When finally he yielded to our persuasion the results he achieved were negligible. Later he informed us that there was some subtle difference in composition between the brain stuff of the plant men and the flesh and blood creatures such as ourselves and the Neptunians that prevented him establishing contact.

Frankly we did not altogether believe him. Probably the position was that the plant men were in some ways Gark's intellectual superiors, and only by shutting his mind completely against them was he able to prevent them reading his brain. That would explain, too, why he could extract nothing from their brains. In contrast to the other Neptunians, Gark's attitude towards them was less of fear and dislike and more of complete indifference. He preferred, he conveyed to us, to have as little as possible to do with them. But perhaps this was merely due to the fact that he had long ago passed beyond the compass of any human emotion, and that utter indifference to most

(Illustration by Paul)

"We hesitated for only a moment. Wherever a stretch of leathery wing showed, our heat ray flickered and another bird went toppling down."

things was a normal habit with him. I don't know. In this instance I can simply record things as we found them.

WE tried him again in the hope of getting from him some advice, good or bad, as to how we should deal with the newcomers, but here we came up against his practical limitations. When he chose to release his accumulated knowledge he could be a veritable storehouse of information, but there his usefulness began and ended. As I fancy I have intimated earlier in this work, from long disuse of the faculty he was now unable to look into the future; his ability to reason ahead had atrophied and at length failed altogether.

We left him to himself, the last of the great experiments of Neptune, a colossal failure by virtue of the very success he had achieved, left him to brood perhaps over the days of vanished greatness, if brood indeed he ever did. More likely he had passed ages ago into a state of Nirvanic calm where most things had ceased to matter.

But if the Neptunians disliked and avoided the plant men the feeling was more than reciprocated by the little

creatures. They shrank from contact with them as though the touch of them were pollution . . . Perhaps it all had its beginning 'way back in the dim ages of the past before either of them had evolved to their present form. If one had been able to trace back to the root stock of each race the enigma might have been solved.

Curiously enough it was through the Neptunians that we at last managed to find a method of repairing the polyhedron. Our own metals had refused to amalgamate with the metal of the flyer and we were nearly giving up in despair when one day, Halvus Tar, who had been an interested spectator of our experiments, asked us what it was that seemed to be baffling us.

We told him, more out of courtesy than for any other reason. He displayed quite an accession of interest once he understood what was wrong. I think in his own queer way he was genuinely fond of us. At any rate he asked to see the strange metal, and we showed some of the thin sheets we had found on the floor of the storeroom of the polyhedron.

Then haltingly he explained that such a substance was not altogether unknown on Neptune. The inhabitants, however, not being great metal workers, and finding little or no use for it, had done next to nothing with it. It possessed peculiar properties that rendered it more or less useless for most of their purposes. One was that it was found almost always in a liquid state, and it rapidly hardened before it could be worked. Once it had been exposed to the air no amount of heat applied to it could render it malleable. A good deal of this, however, may have been due to the fact that the Neptunians possessed no electric furnaces; their ideas of heat were radically different from ours, and for generations 150 degrees Fahrenheit had been the upward limit of their range of temperatures.

Halvus Tar, however, told us that many of their ancient sages had held that the core of the planet was composed of this metal, and that any attempt to mine it would result in the balance of Neptune being disturbed. Whether or not there was anything in the last part of this suggestion, the first part of it seemed quite feasible. It was in a way merely a variation of the osmotic theorem, and if it were correct it would no doubt explain why Neptune's mass was not in proportion to its size. Until within the last half century or so the greater proportion of the astronomers of the Inner Planets had reasoned that the lesser gravity pull on such a huge planet must be due to the fact that it was probably in a gaseous or semi-molten state. Here, at any rate, it looked as though we were within measurable distance of solving the enigma that had puzzled scientists for generations.

When we asked to be directed to the place where this substance could be found we had some difficulty in getting any definite particulars. For centuries no one had been in the mine, or excavation, or whatever it had been originally. A series of catastrophes following the early discoveries had disinclined people to proceed any further with the mining works, and with that inconsequence which seemed an ingrained characteristic of the Neptunians the workings had been abandoned, and even the location lost sight of.

Halvus Tar, once he realized that it was a matter of some considerable importance to us, certainly bestirred himself to some purpose. He pawed over such of the old records as were obtainable; I fancy he even interviewed Gark in the hope of extracting some information from that vast storehouse of past knowledge, and in the end was able to give us indications that resulted in us narrowing down the field of search to within certain well-defined limits.

With the utmost possible care, for we had no idea what would happen once the stuff commenced to rise to the surface we began to drill, following as closely as we could the ancient earth method of tapping oil-wells, and had the satisfaction of discovering, after one or two false starts, that our ideas had been correct.

THE stuff came bubbling up like an oil-gusher, but at a much slower rate. Our big difficulty with it from the start was in its tendency to harden almost immediately it came in contact with the air. Indeed in one boring we put down the substance actually congealed, if one can call it that, in the well itself, with the immediate result that we had to abandon it in favor of another boring.

We solved the problem before things had got too far—we always had a fear that the air might penetrate to the deposit below and the whole of it solidify—by erecting a vacuum chamber over the site of the new boring before ever we put a drill to the ground. We built the chamber large enough to allow of all the equipment of a full-sized laboratory besides room for the workmen. The liquid metal was then drawn off free from contact with the air, and decanted into the Dewar bulbs, as, for convenience sake, we called the bottles the plant men used. Actually there were radical differences, as soon became apparent, between them and the Dewar bulb as used on Earth for the storage of liquid air and kindred substances—they partook more of the nature of vacuum flasks of a larger growth—but the name served as well as any, and so it stuck.

It took us the greater part of a month getting a big enough supply to repair the damaged polyhedron. The stuff spread wonderfully thin in actual practice, and it took numberless applications before we succeeded in building up the requisite thickness.

We were a little puzzled at first as to what we should use to support the initial film. You see, it wasn't as though we were dealing with an actual solid material that could be laid over the gap in the polyhedron and then cut or welded so as to join up with the original shell. To our minds it seemed much as though we were pouring water into a hole in an iron plate in an abortive attempt to repair it. At the moment of contact it did not acquire a sufficient rigidity to bridge the gap and take the weight of the successive layers.

Originally no doubt the shell had been built round a mould that could be broken away once the stuff had set. Our first natural idea was that earth or clay or some similar substance had been used but all kinds of experiments with anything of that nature merely resulted in failure. Probably the plant men themselves could have shown us—it did not require any precise method of communication for that—but when we brought them along and indicated by signs what we wanted to know we failed to get even the faintest glimmer of intelligent interest out of them. Secretly we imagined from the height of their superior wisdom they were watching with amusement the result of our puny efforts to grapple with matters outside the scope of our particular attainments.

We solved the problem in the end in a fashion by shoring up the underside of the hole with wood, and into a sort of trough thus made pouring the liquid stuff. The result was hardly satisfactory. The outside surface amalgamated all right with the outside of the shell, but we had considerable difficulty in removing the wooden supports, and when at last they came away they left the undersurface all scored and pitted, and displaying an alarming tendency to crack.

Oddly enough it looked as though splinters of wood had the surprising power of being able to penetrate the stuff, and, if one may put it that way, set up a toxic condition in the metal in much the same fashion that a splin-

ter in human flesh will become the focal point of a fester.

Whether this condition would remain purely local or gradually spread to the whole of the metal, and finally cause it to split and disintegrate we had no means of knowing. Observations over a period of weeks failed to reveal any marked change, which was not to say that none might not take place once the shell was exposed to the cold of space. But since we would undoubtedly have to face that very vital problem some time or other on the return voyage from Neptune to Earth we loaded the storeroom of the polyhedron to capacity with the bottle of metal.

THE supply we already had was not sufficient, so we set to work to make more containers. That was simple enough work. The vitreous mineral of the Neptunians proved an even better material for the purpose than the original bottles of the plant men. It was readily plastic under a moderate heat and could be worked into the required shape with little or no difficulty. In the end we had prepared and filled several hundred of what were virtually large vacuum flasks with the precious liquid.

Meanwhile our explorations had been going on in other directions. Our various scientific parties had covered practically the whole surface of the planet with the exception of the polar regions and the bleak country to the north, honeycombed with caves, where the Gongkas had their lair. We were not anxious for further encounters with those monsters, though we promised that the next expedition from the Inner Planets would bring along the kind of equipment that would effectually clean them up.

The net results of the various expeditions were quite satisfactory we found when we had them collated. Neptune was particularly rich in a number of rare minerals, including this rather useful liquid metal to which the plant men had first introduced us. Its people were a decadent easy-going race, one that would not be affected adversely by a properly regulated influx of people from the Inner Planets. Probably they would gain from contact with us. Only a relatively small area of the planet was being used, though the bulk of it, with an increase in the number and power of the artificial suns, could be made decently productive.

Apparently they were indifferent to the gains that might accrue to them if they joined the confederated planets; but they gave us to understand that they would welcome contact with more of our kind. Our handling of the Gongka menace and the way we had overcome the plant men, accident though it was, had convinced them that we came of a race that could do them no ultimate harm.

Gark in a communication he made to Paula gave his views on the matter. After the first couple of interviews with us he always insisted on dealing with us through Paula. Perhaps this was because she was the only woman of the party and he himself had once been a man before he became an experiment. Or it may have been merely that he found her more receptive than the rest of us.

Gark thought: "It can do no harm to have Earthmen come here in their numbers. It may even do ultimate good. We are a dying race. A very few centuries will see us only a memory, and it is not right that with the brief span of life left ahead of our race, we should attempt to shut the other peoples of the system out from the use of things that are valueless to us. Our planet Tex may well be the treasure house of the solar system. We have neither the energy, ability, nor inclination to use those treasures to their fullest. Take them and do with them what you will."

Myself I thought that pretty cool. The rest of the Neptunians might not feel the same about the matter. However, what Gark thought usually seemed to go with them, and I doubt very much whether they would have troubled to oppose his suggestions even had they run counter to their own desires. But curiously enough, that situation appeared never to have arisen. Perhaps it was that Gark was in a position to know their minds better than they knew them themselves. Then, too, he was the nearest thing to anything like a supreme power the planet possessed, even though he had neither the will nor the need to enforce his wishes, and so the impact of his personality was by no means negligible.

So time drifted by. Our preparations for departure were almost complete, and a very few days more would see us take to space on the homeward track to Earth. Then that happened which brought all our plans to naught. A factor we had not taken into serious consideration was nearly the cause of our undoing.

CHAPTER XXIII

Marooned!

WE were to leave as soon after dawn as it was light enough to see clearly.

I awoke abruptly to the sense of another presence in my room, at the same time becoming aware that the lights were full on. My eyelids opened with difficulty, and when I attempted to turn my head to see who the intruder was—someone sent in to rouse me I presumed, naturally enough—to my consternation I found I could not move.

In some ways I was still in a half-dazed state. I was almost ready to persuade myself that I was in the grip of a nightmare whose actual effects were slow in passing. Such things have been known. I have experienced them myself. But the feeling did not pass. If anything it grew in intensity as the slow seconds ticked away, and soon I became convinced that it was no nightmare, but stark reality confronting me.

My faculties cleared, but I could not achieve movement. I lay on my bed, so completely paralyzed as though I was bound tightly hand and foot. More so, for I could not move a finger, could not even turn my head. My own reading was that my eyes had opened involuntarily the faintest fraction of a second before this queer disability had seized on me. That being so, they had remained open.

The rustling sound which had been one of the combination of little causes which had awakened me drew nearer. A grotesque shadow, thrown by the glare of the light tube overhead, lay for an instant across my face, a weird, thin, flickering shadow. Then a tiny hand with something so small I could not rightly define its proportions clutched between its two fingers and an opposing thumb came into view.

For an instant the small face of one of the plant men danced before my eyes, then a thin spray of liquid jetted from the instrument in its hand, nearly blinding me. I was surprised to find that I could move my eyelids, the paralysis seemed to have passed away from my neck muscles. I tried to speak, but I could not.

Whatever the thing that held me in its grip, it was doubtless something in the nature of a local anesthetic. Its effect could be removed as readily apparently as it could be applied . . . totally or in part.

I was sure of that the next instant when I became aware of a faint pricking in my right leg and sensation began to return to it. Twisting my head a little to one side, which I could do now, I was able to see the plant man reach over to my left leg, jab into the calf something like a tiny hypodermic syringe, and a second or so later it too had come back to normal. The plant man came round to

me, and made signs that I interpreted as meaning I was to get on my feet.

I obeyed, mainly because I had a hope that by doing so I might be able to turn the tables. I was never more completely mistaken. Until I attempted to get from the bed and stand upright on the floor, I don't think I ever realized just how great a part one's arms play in balancing one. My arms were not so much immovable as helpless . . . powerless. I could make odd little ineffectual gestures with them, but I had lost the ability to raise them. I think I had even lost the desire. That strange drug they must have given me had sapped my will-power even as it had partially paralyzed my motor nerves. Had my life depended on it I could not have lifted my arms two inches. I was unable even to close my fists. I could not fight that insidious something that seemed to suggest I must not try. To all intents and purposes I was an automaton.

I found that out the instant I stood on the floor. The plant man opened the door, beckoned, and I came.

There were others in the glare of the passage, men—and one woman, I saw with gladness—shambling awkwardly along, arms dangling against their sides . . . Behind them numbers of small, active plant men urging them along.

I felt—more particularly when I saw Paula and knew she saw me—that I should do something, make some mad attempt to break the thing that held me in thrall. It was no more than a thought, an idea that flashed up and died, that came and passed. I had neither the wit nor the will to do anything. Later others told me their experience was the same. The deadly drug—call it that—which had been administered to us sapped all initiative. Minds as well as bodies were held in subjection.

We had not been as careful as we should have been. That much was obvious. No doubt we had underrated the plant men's cunning, while we had recognized their intelligence. Yet it was difficult to see what else we could have done. Between the two races stretched an intellectual gulf that hardly anything could bridge. They were of quite as high an order of intelligence as we, in some respects no doubt they far outshone us, but the trouble was we had no common basis of understanding. As well expect an intellectual alliance between the animate and inanimate . . .

WE had searched them for arms. They had none. We could not, without undue cruelty, have kept them close prisoners. As it was we had kept them away from the part of the ship that mattered, given them their own quarters, and seen that they did not venture beyond. There had been a guard about to see that they did not stray.

They must have had resources of which we had not dreamed. The things I had seen them use on me, that tiny spray and the microscopic hypodermic, could have been concealed quite easily. If they could be taken to pieces the sections would have escaped our eyes. Remember the plant men themselves were no more than eighteen inches or so in height. Everything connected with them was made in proportion. And their evolutionary processes had been totally different from ours. Looking back one could see a thousand ways in which they might have tricked us. But that was when our eyes had been opened. I do not think on reflection that we could be convicted of undue carelessness. We were up against the menace of an alien intelligence. That is the best way to explain it.

That shambling automatic march of ours took us through the corridors of the *Icarus*, from one level to another, then to a port that swung open and gave access to the ground. We were marshalled out, driven like sheep.

They halted us five hundred yards or so away from the ship, fortunately as it turned out on a grassy patch. A number of the plant men appeared, more than I thought there were. Something about the sight of them puzzled me. The thought proved too elusive for me to grasp in my then condition, though in a vague way I felt it had something to do with my seeing double. Which, of course, I was not.

They came to where we had been halted by their colleagues. Again I saw the flash of tiny little instruments, too small for details to be noticeable. Again a wet spray, somehow different from the one that had revived me, hit me full in the face. I felt myself sinking, if such a term as "feeling" can be applied to a condition that was simply an absence of all sensation, and of a sudden in a dim way I became aware that I was lying on my back on the grass, gazing skywards and unable to move hand or foot.

The feeling passed quickly enough, bringing with it a clarity of mind that was something like a return to my old self. I found I could twitch a little, move my hands and feet spasmodically.

It was about that time I heard the roar of rocket tubes. But only when I tried to raise myself to see what it was all about did I realize that the induced paralysis still held me. Nevertheless the sight was not lost to us.

The *Icarus* was rising swiftly through the cloud-laden ceiling of Neptune, a long metal cigar hurled towards the zenith by the power of her engines. They could only have used the rocket tubes the once, for we saw no further flashes and heard no other sound. Fearful of the friction of this dense atmosphere, the plant men must have got the gravity screens to work almost at once.

Quickly the ship ascended until she was no more than a slim outline against the gray. Then abruptly she was through and had vanished from our sight. On her heels, barely visible beams stabbing downwards, went the polyhedron, rising up and up, until she too was swallowed by the cloud ceiling.

I groaned, and was surprised to find that suddenly I had become articulate. I tried to move, and found I could. In another instant I had risen to my feet. All round me the others were slowly re-discovering their lost ability. Evidently the anesthetic effects of the drug—or whatever it was—had been carefully timed to allow the plant men to get clear of the planet. Once that was done it did not matter to them how soon we revived.

Everybody was talking at once . . .

". . . and that's what's happened. They fooled us, let us mend their polyhedron . . . fooled us. We thought them harmless, and all the time they must have been watching and learning. But how they did it beats me."

"Everybody's here? No one missing? That's good. It's the only good part of it."

"May the gods of the airways . . ."

". . . but how? We can't get away. We're marooned. What hope is there?"

"Phil." A small hand slid into mine. "You're all right, dear, not hurt or harmed?"

I looked down on Paula's white anxious face.

"No. I'm untouched. And you?"

She nestled closer to me. Perhaps she thought that answer enough for the moment.

"Grayne." It was Rifflin at my elbow. "Have you any idea what happened? You were almost the last, save for the duty men, to bed last night."

(*Continued on Page 424*)

REBELS OF THE MOON

By **Manley Wade Wellman and Max Jergovic**

(*Illustration by Paul*)

There was a blinding flash which gave way to billowing clouds. Of the peak and crater little remained; of the ships and men, nothing at all.

REBELS OF THE MOON

Based upon the Fifth Prize ($5.00) winning plot of the Interplanetary Plot Contest won by Max Jergovic, 3022 N St., Omaha, Nebr.

WHEREVER light touched the landscape it was soft gray, wherever shadows fell it was flat, absolute black. There were no intermediate shades. The sharp contrasts were no less striking than the gigantic, angular heights that rose here and there upon the flat, naked plain. Along the horizon, sharp against the star-peppered midnight sky, rose a range of lofty peaks. No sound relieved the oppressive silence. Not a blade of grass, not a trickle of water was visible. Not even a breeze stirred—there was no air.

At zenith overhead hung a tremendous globe, flecked brown and gray, shedding light upon rock, pinnacle and mountain. It was Mother Earth, looking down upon her dead child—for the black-and-gray landscape was that of the Moon.

Yet on the face of that dead world was some motion. Out of the dark skies plunged an egg-shaped metal hull, trailing streams of fire. It was a fast rocket-ship that braked to a crawl as it neared the lunar plain and then dropped lightly down.

In its side a lock-panel swung open and emitted a human figure, clad from head to foot in space-armor. Not even the swaddling folds of metal-strengthened fabric, inflated with air and padded with insulating material against the heat and cold of airless void, could conceal the vigorous lines of the spare frame inside. Through the glass front of the helmet looked a lean, lined face with intent eyes. Many a criminal of the middle twenty-second century would recognize Seumas O'Grady, master scout, wizard of disguise, expert in a thousand sciences, and ace of the World League's secret police.

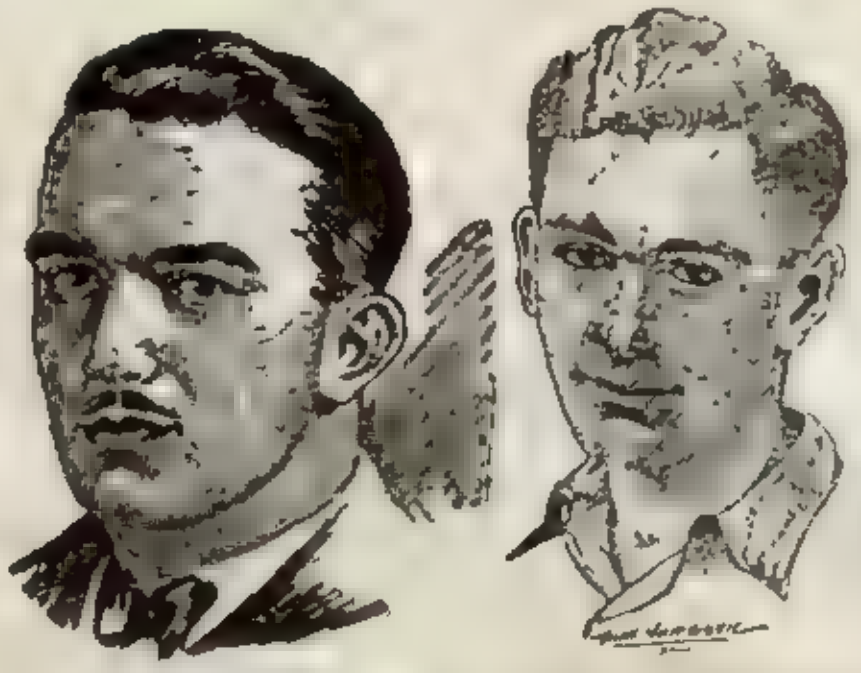
O'Grady looked upward at the cone-shaped mountain under the very flank of which he had landed his craft. He permitted his face to relax in a smile. Another O'Grady triumph was imminent—a triumph that might dwarf all the many successes that marked his record of twenty years' service back there on Earth.

For he had reached the Moon in secret, as the final move in a series of painstaking observations. It was his task to find out what was preventing the projected flight to Venus.

In 2150 the Moon was still the farthest frontier of the space-navigators. Little did that dead, inhospitable satellite recommend itself to explorers and settlers. Yet it offered one priceless advantage to long-distance rocket voyages — its light gravitational pull, barely a sixth of that of Earth. A heavily laden ship, such as might never rise from a Terrestrial base, could clear from the Moon and seek other planets of the solar system.

And so, many months ago, the World League's department of astronautics had established a lunar base and placed a picked crew of scientists and mechanics there to prepare for a voyage to Venus, the cloud-veiled planet that circles the sun just twenty-five million miles inside Earth's orbit. Imagination was beggared at the thought of such a journey, and of the adventure at the end of it. What undreamed treasures, what fascinating experiences, awaited the interplanetary pioneers? Doctor Von Rickopf, latest and most brilliant of the German rocket engineers, had been placed in command on the Moon. There he was to supervise manufacture of fuel from the oxygen and hydrogen drawn from mineral deposits, to assemble the big space-ship sent a piece at a time by small rockets, and eventually to command that ship from one world to another.

The work, though gigantic in scope, was simple in plan. It seemed sure of success. Eagerly the officials on Earth had awaited the day when the voyage would begin. Yet Venus had come into favorable opposition—and the expedi-



MANLEY WADE WELLMAN — Who wrote the story.

MAX JERGOVIC* — Who furnished the plot.

THIS story, based upon the fifth prize winning plot of the Interplanetary Plot Contest, portrays some of the temptations and experiences that will follow on the first idealistic flights into space.

All exploration of man has been made with the purpose of adventure or opening up new lands to the race. But inevitably there has followed the era of greed and materialism, of exploitation and cruelty.

Yet this story is not simply one of greed and cruelty. Imagine a man with an intense desire to explore other worlds, and feeling that he is hindered and restricted by bureaucratic office holders. Then present him with an opportunity for obtaining great wealth, so that he can be independently free as a scientist. What should he do? What would you do? This excellent adventure story gives at least one answer.

*Mr. Jergovic has drawn this picture of himself.

tion had not cleared from the Moon. The time passed, Venus spun away, approached again. Again the expected take-off was delayed. And now, inside of five days, a third opposition was due.

The words of O'Grady's chief still rang in his ears. "Von Rickopf has explained that he has had trouble about making fuel—and, heaven knows, he will need lots of it. We've visited him, and he showed us that there wasn't as much as had been planned for, what with the time and equipment. We haven't anything on him, but yet there's something funny going on out there.

"So that's where you come in. You're as good a space-wrangler as the service can brag about. We have a little rocket racer ready for you at a sky-port forty miles from St. Louis. With luck and good sense, we'll get you away without anyone seeing you."

The chief's finger pointed to a spot on the lunar map before them.

"There you'll find the government base, in the crater of Theophilus. Don't report there—sneak up on the place unseen. We've spotted little short-shot rocket carriers leaving it and crossing the face of the Moon, but they duck into shadows and our telescopes lose them. Go and find where they're going with those carriers, and why. Don't try to keep in touch with us by radio—they may pick us up and locate you. Just flash to us when you're on the way back, or in case of danger."

And so O'Grady had come to the Moon, lain in hiding near the broad sunken ring of Theophilus and, bit by bit, traced the path of the mysterious carriers. For a thousand miles he had chugged unostentatiously along and now, in the light from his own native planet, he stood at the very brink of the secret.

For this tall peak, he had discovered, had within it a crater of small width but of great and shadowy depth. Into this he had tracked the carriers. A cautious bit of scouting was all that remained.

EVEN in his space-armor he was of a feathery lightness. Nimbly he scrambled up the steep, rocky face of the cone, jumping from one ledge to another like a goat. An hour's brisk climbing found him on the lip of the crater, into which he cautiously peered. All was black and quiet.

Nobody would be there without a light, he argued. From a pouch at his belt he took a powerful radium flash and, extending it downward at arm's length, turned it on and swung the brilliant beam to and fro. He saw no other human being. But he did see that the whole floor of the crater sent back a metallic gleam.

Across from him a perpendicular row of cleats formed a ladder downward. He turned off his flash, trotted quickly around the edge of the crater for perhaps a furlong, and began to let himself down into the darkness. Descending confidently on the well-fixed cleats, he felt his metal-shod soles land on rock. He turned away from the wall and again illuminated the scene with his light.

The bottom of the rocky tube was filled with cylindrical metal drums, set one upon another in great stacks and pyramids higher than his head. He examined the nearest ones, found them to be barrel-size and of silvery *lunium*, a metal smelted on the Moon and capable of sustaining great pressure. On each was stamped a brief formula table, showing what amounts of liquid oxygen or hydrogen were in the container. That assured him of what he had already guessed—the place was a secret store of rocket fuel.

And, of course, the mystery was explained. The fuel store at the government base had been scanty because so much had been carried to this spot. Yet another riddle presented itself—why had Von Rickopf done this thing? What profit did this cache represent?

He began to move among the stacks, carefully counting the drums and figuring their contents. At the end of an hour he was still puzzled. According to computations of astronomers and mathematicians, the trip to Venus and back could be made on even less fuel than was here stored. And there must be nearly as much at Theophilus.

From all he had heard of Von Rickopf, it didn't seem in character. The fellow must be an enthusiast, a fanatic, almost, else he would not have devoted his life to so dangerous a science as rocket engineering. For such a man, the chance to fly to Venus would come as Heaven's own answer to the prayer of his heart. He would brook no delay, and surely he would not deliberately thwart plans for the voyage by this deception.

This great volume of fuel represented long, hard hours of labor, showed cunning in the hiding, not to mention disobedience to orders from the world government. There must be some excellent reason for such action. What was it?

O'Grady shook his head inside his helmet. He hated to admit that he was baffled, but there was hardly time to indulge his vanity. In five days Venus would be in opposition, and that was too short a space for him to discover and defeat whatever treason Von Rickopf might be planning. The crew at the government base must number a score at least, and undoubtedly they were in league with their commander.

How could he, a lone officer, overcome them? His best action would be to hurry home to Earth, make a report, then lead back a strong enough force to seize the base and the secret fuel cache and place Von Rickopf and his fellow-conspirators under arrest. Having made this decision, he flashed his light once more around the crater to impress the scene indelibly upon his mind. Then he began to climb up the ladder once more. Yard after yard he rose, until his gloved hand fell upon the last cleat.

At that moment a helmeted head rose above the crater's rim and the muzzle of an electro-automatic pistol stared into his face.

Many another man's impulse would have been to shrink back, letting go all holds, and his adventure would have ended in a smashing fall backward to the rocks below. O'Grady was trained in a different school. He clung the tighter to the cleat with his left hand, while his right dropped toward his own weapon, slung in a holster at his hip.

But two more heads rose, one on each side of the first. Two more automatics were levelled at him, and the beam of a flash picked him out of the blackness. His gun, half out of the holster, slid back in. He held up his right hand, showing it empty as an acceptance of momentary defeat.

One of the three men beckoned him to climb on out. He obeyed. In a few moments he was disarmed and searched. Then the same man motioned him to begin the descent to the plain, on which he now perceived such a rocket carrier as he had previously trailed, set beside his own ship. In front of this were grouped four or five other figures.

Quickly O'Grady and his captors found their way to the base of the peak and walked toward the carrier. A lock-panel was flung open and the officer was nudged into it. The others followed and shut the panel behind him.

Now helmets began to come off. Two of the party bared O'Grady's head. He found himself facing a man of late middle age, with sparse gray locks combed back-

ward from a high narrow forehead and slanting, tufted brows. The brilliant eyes were patently the windows of a high type of intellect, while the great hooked nose, hard-set mouth and anvil-pointed chin with its spike of beard bespoke the man of energy and action. Too often had O'Grady seen that face in pictures or upon television screens not to recognize Dr. Von Rickopf.

"You didn't expect us, eh?" queried the German in accented English, his lips curving in a sardonic grin. "That crater wasn't entirely unguarded, my friend. There are radio eyes and ears in it, and they picked you up the moment you flashed your light downward. If you had been really dangerous, there was a radio-controlled gun concealed in the center of the floor that could have sent you to kingdom come. But we can't remain here. I think I had better take you to Theophilus with us."

Helmets went on again and O'Grady with his captors was taken to the rocket that had been set beside his own. During the journey O'Grady did not attempt to look out or to speak. His eyes and his thoughts were busy, searching for the way out of his difficulty.

He blamed himself for carelessness in being caught, putting his person in danger and doing the League a slovenly service. But how to escape, and when? There seemed little to do at present except wait and watch for the break that might come—must come.

The journey to Theophilus took not more than twenty minutes, and at the end of it the rocket settled down. Immediately the members of Von Rickopf's crew replaced their helmets and emerged. O'Grady spied his captured rocket-racer, landed before the other ship, with two men guarding it.

The view of Theophilus was excellent. All around stretched a flat, circular plain, bathed in soft light from the full Earth above. The horizons were limited at some miles in each direction by a majestic circular ridge, rising steeply skyward and terminating in a saw-toothed series of peaks thousands of feet above the level. In the middle of this circular formation rose a single pinnacle, like the central cone of tin in an old-fashioned cake-pan. All these high places were distant from where the two ships had been set down, but the cloudless, airless void made every far-off feature as clear and sharp as though it were but a few feet away.

Close by O'Grady could see two works of human hands. One of these was the long-distance rocket-ship which had been assembled for the voyage to Venus—a fish-shaped craft as large as the Zeppelins of two centuries ago, standing on its broad tail with its nose toward the black sky. By far the greater volume of this huge vehicle must be filled with fuel and supplies, he knew, with only cramped quarters for the operators.

The other object was a low, rectangular structure of *lunium*, three feet high, a dozen yards square, and flat at the top. This, one of his guards indicated, was the upper part of the party's living quarters. At one edge steps were cut into the rock alongside. Down these Von Rickopf led the way, then through a panel into an air-lock and thence into a lighted hall.

CHAPTER II

Moon Riches

HE threw off his helmet and the others did likewise. "We are very comfortable here," said he to O'Grady, still in a mockingly courteous tone. "Our little home stretches out below through tunnels and caves for three levels down. Plenty of room for living, for recreation, for work."

He motioned for the two guards to conduct the prisoner through a side-door. As they obeyed, O'Grady heard the others walk away.

The guards began to divest themselves of their cumbersome space-suits. One of them stood forth revealed as a boyish fellow with a frank, likeable smile.

"I am Lothar Manvel, the radio operator," he said to O'Grady. "In this room, as you see, I do much of my work."

The detective saw radio machinery and parts in every corner, and on the walls were half a dozen television screens of various sizes.

"This is the best equipment of the sort that has been manufactured on Earth," went on the young man with all the enthusiasm of a specialist. "See, how clear is our reception."

He twiddled some dials on a nearby cabinet. The largest screen broke into light, music filled the room, and O'Grady saw a group of dancers performing.

"That is in Sydney, Australia," Manvel told him. "Do you like the little brunette in the center?"

He also showed O'Grady the smaller screen in which Von Rickopf himself had discovered that there was a visitor to the secret crater where the fuel was cached. The other guard relaxed his stern look of vigilance and joined in Manvel's evident attempt to put the captive at his ease.

But the conversation was cut short when a buzzer sounded and a small round screen was illuminated, showing the face of Von Rickopf.

"Bring Mr. O'Grady to my office at once," said the doctor's voice. "Perhaps the time has come for him to receive the explanation that is surely due him—from me and from Lieutenant Guechemich, an old friend he'll recognize."

The guards conducted O'Grady into the hall again, took him down a flight of stairs, and pushed a button to let a panel slide back.

Two bearded faces looked up—Dr. Von Rickopf's with its pointed chin-tuft and Lieutenant Guechemich's with its black, shaggy bush. The two were sitting at a table, on which stood decanters and glasses. Without rising, the doctor beckoned O'Grady to enter.

"Come in, come in!" he said, as heartily as though he greeted a welcome guest. "You others, you may retire."

The guards did so, and the door closed behind O'Grady.

"Perhaps you are tired, my friend," went on Von Rickopf. "Drink a glass of wine with us, it will refresh you."

He filled three glasses and held one up for the prisoner. O'Grady crossed to him, took it, then set it down and picked up the one that stood in front of Guechemich.

"I've heard that there's luck in a changed cup," he said.

Guechemich growled profanely and his florid face turned purple. Not so Von Rickopf, who laughed loudly and slapped his knee.

"Do you think I'd get rid of you by such an amateurish means as poison?" he said. "No, no, comrade. I'm not going to get rid of you at all. Far from it!"

O'Grady looked his mystification. Von Rickopf motioned him into a third chair at the table.

"Guechemich has been telling me about you," he continued. "You're an interesting and capable fellow, it would seem."

"Perhaps the lieutenant is prejudiced," offered O'Grady.

"Perhaps. It seems that once he expected to trade on a certain superficial resemblance he bears to you—with his beard shaved off. You found out about it and forestalled him."

"I did," said the officer. "I spoiled his show, but I hadn't enough evidence to send him to prison."

Guechemich scowled fiercely. Again Von Rickopf laughed.

"Such a face to pull, Lieutenant! Is that the way for us to make friends with Mr. O'Grady?" He spoke to the prisoner again. "Your record and your accomplishments interest me greatly, and I have an offer to make. But, first, you must be wondering what is going on here in our little community."

"I came nearly two hundred and fifty thousand miles to find out."

"And find out you shall. Mr. O'Grady, have you any conception of why the government wants to establish colonies on Venus?"

The detective nodded. "It's a planet the size of Earth, with water, soil, atmosphere—"

"Enough, enough. It is a second Earth, in fact, *nicht wahr?* And it is a second Earth which is as yet in a primitive state, with all resources untouched and unexploited. Astronomers have found that out. Well, the denizens of our own overcrowded world want to go across space and capture that dazzling prize."

"Yes," prompted O'Grady.

"But are you as thick-headed as the others? Don't you see that, obsessed with the idea of making an expensive and dangerous flight to Venus, they are passing up untold riches within much closer reach? Look, I'll give you an example."

He took a small leather case from his breast pocket and, opening it, spilled onto the table an object the size and shape of a pigeon's egg. "Look at that," he said shortly.

O'Grady picked the thing up. It was a crystal of some kind, soapy to the feel and dull on the surface. He weighed it carefully in his hand, then held it up to the light. Within it white fires seemed to burn.

"It looks like a diamond, and a big one," he said at last.

"Yes, it is a diamond," agreed Von Rickopf. "And not only is it a big one—it is a very good one."

"It must be worth a fortune," went on O'Grady. "Why have you brought it here from Earth?"

"But I didn't bring it here. *I found it on the Moon!*"

IN spite of himself, O'Grady betrayed his astonishment. Von Rickopf leaned quickly forward and took the gem from him. For the first time, a sardonic mask seemed to fall from the German doctor's face. O'Grady saw his lips tremble, his eyes burn, his face grow pallid as if under stress of great emotion.

"And it's only one of hundreds—thousands!" he cried. "We in this little colony are the first to find them. There are volcanic caverns throughout this entire area, each of them with as many diamonds as the Kimberly mines! Such wealth would bring power, luxury, never before enjoyed by any one man—"

Guechemich looked sharply at his superior. The latter seemed to recover himself.

"That is, never before enjoyed by any small group, such as made up of our twenty," he amended. "Well, O'Grady, now you see why we must pause in our aspirations toward worlds across the void. We cannot scorn the chance to pick these things up."

O'Grady shook his head. "You're a government agent, and as such you found the diamonds," he said. "If you'd try to sell them for your private profit, you'd get into trouble."

Von Rickopf shook his head. "That's why we're abandoning the trip. We expect to manage a little accident five days from now, on May 4, the date of our flight to Venus. The ship will explode. We can prove that it was unavoidable."

"You realize, of course," said O'Grady, "that the building of that ship represents the work of years, the spending of tremendous sums of money."

"We realize it. And its destruction will disappoint the fools back on Earth. It will be years—decades, perhaps—before they will bother to try again. The Moon will be deserted.

"But we, having laid aside our commissions, will return as private individuals. Then we will be entitled to whatever finds we make. The diamonds will belong to us. You see this was all planned when I interested the World League in the Venus flight.

"How, you were going to ask, can I stoop to this crime? I'll tell you. At first I was eager to accept my commission to make a trip to Venus. It meant progress, freedom, I thought. But I reckoned without their high mightinesses in easy chairs at the astronautics department offices." Von Rickopf's face darkened and his voice grew hard. "In ease and luxury they demanded that we do this, plan thus and think so. It was maddening, my friend, maddening!

"I had found the diamonds on a private expedition to the moon. Had circumstances been more bearable, I would never have thought of them again. But I realized that, if I took them, I could free myself from all stupid restrictions, and have wealth into the bargain—enough, perhaps, to finance my own experiments with rockets. And so, when I returned to the Moon as a government man, I was ready. The men of this crew are of my own choosing—I managed to get permission to select them myself. They are all good mechanics and specialists, for otherwise they would not have been approved for the assignment, but they are also all in sympathy with my plan and ready to take shares.

"As to the diamond market being glutted, we have foreseen that also. That is why we have stored a secret supply of fuel. It will be used in sending flights of rockets from here to a hidden spot in the Brazilian forests, loaded with our diamonds. There we shall produce the stones, as if mined in the wilderness. We can make hundreds of millions before our real source is discovered!"

O'Grady sipped wine. His agile mind was busy rationalizing all that he had heard.

"And you've told me this. Why?" he asked.

Von Rickopf patted his shoulder paternally. "Have you not guessed? I want you with us. You are a man of mental force, with a wide range of knowledge and capabilities. You shall be an administrator with us, in charge of the Brazilian base."

Wise plan, thought O'Grady; that station would be too far from civilized country to permit an exposure of the diamond conspiracy. "And I'll be killed, of course, if I refuse. What would my department do when I did not show up within the next few days?"

Von Rickopf gesticulated toward a television broadcasting apparatus at one end of the apartment.

"I plan to have you speak over that," he said. "It is the only sending set in our possession powerful enough to reach Earth. You will call your chief, tell him that all is well but that your rocket needs repairs. You are remaining here as my guest until the day of departure. That will quiet him."

"I could hardly do it if I died," reminded O'Grady.

"True. But Lieutenant Guechemich could. Once he was ready to impersonate you. He can still do so, with a close shave, a bleaching of the hair and eyebrows, a dusting of powder over his healthy rose complexion."

"It would be a pleasure," added Guechemich, who had hitherto contributed to the discussion only by inarticulate growls at O'Grady.

The detective drew a long breath. He had never been afraid to die, but he was in deadly fear of defeat. Be-

sides, he had placed himself in debt to the service when he had stumbled into captivity. By simply and uselessly dying, he could not discharge his obligation. Better to seem to yield and watch for a chance to turn the tables.

"You leave me no choice, gentlemen," he smiled. "I'm with you."

"Splendid!" Von Rickopf's lean hand shot out to grasp his. "You are a distinct ornament to the cause you have joined, Lieutenant O'Grady—for I, as senior officer upon the Moon, commission you lieutenant, junior only to me and to Guechemich."

He rose and raised his wine-glass.

"Fill up, both of you!" he cried. "Here is a toast: to Venus—star of love to the ancients, star of delusion to modern bigwigs, star of power to us!"

The bottoms of the glasses rose toward the ceiling. As he tilted his head back to drink, O'Grady caught a venomous glint in Guechemich's eye. Evidently his old enemy would rather seen him refuse to join, thereby taking the consequences.

VON RICKOPF sent at once for Manvel, the radio engineer. The youngster entered and, at the doctor's orders, began to tune in on Earth. There passed some minutes of dialing, focussing and amplifying, until the screen showed a carpeted office. Seated behind a desk within it was Holmes, O'Grady's superior. Von Rickopf stepped to O'Grady's side and passed his arm affectionately around the detective's shoulders.

"Hello, chief," said O'Grady. "Can you hear me?"

"Yes, I hear and see you," replied the image on the screen. "What do you report?"

"Everything all right, sir. The trouble has been that the materials for the rocket fuel have been too hard to gather. Dr. Von Rickopf will tell you more."

"I have only to say that delays are over," said Von Rickopf in his turn. "We have enough fuel to leave for Venus when she is in proper conjunction on May 4."

"Very good," said the voice of the officer from the screen. "You can come in at once, O'Grady."

"I'm sorry, but I can't. You see, my rocket got bunged up a bit. The mechanics here are putting it back into shape. I ought to be able to take off at about the same time as the ship for Venus."

"Very good. I'll expect you in a week. Is that all?"

"That's all, sir. Good-bye."

Manvel dialed the screen blank. Von Rickopf grinned broadly into O'Grady face.

"Now you're one of us. Manvel, this is Lieutenant O'Grady, who is to take charge of the station we have planned in Brazil. Let him meet the other men and show him our little home."

The two saluted and departed. O'Grady noticed that his companion had a ready pistol in his holster, and that nothing had been said about giving him back his own weapon. He wondered if he could overpower Manvel, disarm him and run. But he decided against such an attempt at present. For one thing, he wanted to be sure that the avenue of escape would lead back to Earth; for another he rather liked young Manvel on first acquaintance.

"I suppose you, as radio operator, keep in close touch with Earth?" he suggested.

"Oh, yes, but only with Dr. Von Rickopf at hand," replied Manvel. "As he told you, our only sending set with enough power to reach Earth is the one in his quarters."

"Isn't there a sending set in the space-ship?" asked O'Grady.

"Yes, but the power to run it is generated by the ship's engines, and the doctor and Lieutenant Guechemich are the only rocket experts in the party."

Once more O'Grady mentally complimented Von Rickopf on his sagacity. By his arrangement he was sure that no message would reach Earth except those broadcast in his presence and under his censorship. However, there was yet another sending set, the one in his own craft. If they would overlook that, and he got a chance at it . . . .

Manvel showed him the laboratories where the fuel was manufactured, the sleeping quarters of the men, and the airlocks through which mining parties went into the vacuums of dark caverns after minerals for raw material. He kept close to O'Grady, and nearly always there were two or more others of Von Rickopf's crew at hand. Each of these, upon being introduced, was respectful but wary. Probably the news of the terms under which O'Grady had joined their force had gone before him.

"I've met fourteen of your friends now," the detective said at length. "With you, Dr. Von Rickopf and Guechemich, that makes seventeen. Yet I understand there are twenty in all."

"Twenty-one, now that you're here," agreed Manvel. "I'll introduce you to the other three later. Just now let's get into space-suits and go look at the big ship."

Willingly O'Grady consented and they went back to the radio room, where they had left their padded suits and metal helmets. Manvel transferred his pistol and holster to the outside of his armor before leaving. The two of them emerged into the gray light of outside emptiness. During the hours that had passed since O'Grady had discovered the hidden fuel, full Earth had fallen somewhat from zenith. Otherwise the same silent vista of Theophilus hung around them like a weird cyclorama.

O'Grady gestured his comrade toward his grounded rocket racer and himself led the way to it. As he had already suspected, it had been dismantled, the air evicted from its interior, Von Rickopf was taking no chances. He poked his head into the tiny cabin, barely large enough for him to sit comfortably within it. With sinking heart he perceived that his radio instruments had been carried away. He was completely cut off from Earth.

"You can't beat the *Deutsch*," punned O'Grady all to himself inside his helmet. "I wonder when the luck of the Irish will begin to operate."

He turned from his disabled craft and followed Manvel toward the big ship that represented his government's hopes for a voyage to Venus. Again he was struck by the magnificent grace of the vehicle's lines. Would he be powerless to prevent its destruction? He felt more helpless than ever.

In a minute they stood, looking up along the smooth metal sides as men raise their eyes to the heights of a sky-scraper. Manvel opened a small panel which was set flush into the hull and ushered O'Grady inside. When they had passed through the airlock he touched a button, flashed on lights, then began to take off his helmet.

O'Grady did likewise, and soon their heads were free to breathe the air contained in the ship. They stood in a shaft that reached upward toward the nose to a height of about thirty feet, with a metal ladder riveted against one wall. The radio operator pointed to a manhole shoulder-high in front of them.

"That leads into the quarters for the crew," he said. "All above there is made up of tanks for the storage of fuel. I suppose you're familiar with their arrangement. Come, I'll show you this apartment."

CHAPTER III

Rebellion!

O'GRADY thrust his head through the manhole. Beyond he saw what appeared to be a low, spacious room that had been tipped over on one side. He was looking through a hole in the floor, that now became a wall with various articles of furniture and pieces of apparatus fastened securely to it. The ceiling made another wall, seven feet ahead of his nose. Craning his head upward he could see light fixtures and a series of hammocks slung one above the other along that ceiling.

"As you see, the use of these quarters depends upon the ship's being in motion," pointed out Manvel, looking in over O'Grady's shoulder. "In space, she will spin on an axis, and the centrifugal force will supply a sort of sham gravity that will hold persons and objects to the outer walls. Those hammocks will dangle from the ceiling, and they will seem to be above instead of ahead. Get the idea?"

"Perfectly," said O'Grady. He was looking down now at the controls. With the ship under way they would be at the rear of the compartment, just as the radio, now some thirty feet overhead, would be at the front. He could manage the ship, he was sure. Yet, without fuel, a crew of stokers and a radio observer, he might just as well be ignorant.

"That set yonder will communicate with Earth," said Manvel. "Not only at this distance, but at twice or thrice as far—perhaps even farther. My one regret is that, in abandoning the voyage and exploding this ship, Von Rickopf will destroy that magnificent instrument."

"I feel as you do," responded O'Grady. "I'm sorry that Von Rickopf's plan must be carried through."

"I was hoping to hear you say that," said the youngster enigmatically.

O'Grady pulled his head out of the manhole. Manvel followed suit but did not open the door at once.

"As you remarked before we came outside, there are three men left for you to meet," he said in a low voice. "I left them until the last for a certain reason. Their names are Stitt, Grob and Minshall. When you meet them, remember that they are your friends."

"Friends?" repeated O'Grady sharply. "What do you mean?"

For answer Manvel smiled broadly. Then he lifted his hand to his forehead and the fingers were twined into the secret identification salute of the World League's secret police.

Both of O'Grady's hands shot out to grasp Manvel's.

"Buddy, you're doubly welcome!" he cried excitedly. "Who are you, and what's your rating?"

"I'm just a special deputy," responded the other. "One of the punk kids who takes a reserve rating for the thrill of it, and for the hope that it may work into a regular job. And Manvel's my right name. I joined on with Von Rickopf in the best of faith, thinking I would get a chance to do wonders with my other and greatest hobby—radio. The rest of the crew he picked more carefully; I suppose he thought that since I was a growing boy, I would be easy to win over. Of course, he didn't know about my commission."

"And you say there are three more we can count on?" said O'Grady."That makes five of us."

"Against sixteen. Pretty long odds."

"I've seen longer," the detective said. "Well, now I feel as if there's a Chinaman's chance of coming out on the credit side of the ledger. How about these three others?"

"They're just ordinary space-hands, a little afraid of Von Rickopf, I imagine. It took me loads of work to find them out. None of them know anything about space-flying except how to stoke the rocket tubes. Neither do I. I can't run anything except a radio."

"I can," O'Grady told him. "At least, I can wrangle along when I have a chart to show my course. Let's go meet your friends."

The man and the boy once more set their helmets in place and, quitting the ship, started back to the underground camp. O'Grady's heart beat high.

Never in his life had he asked more than a fighting chance, whether the battle was fair or foul, and now he was getting it. And he was glad to find that Von Rickopf's judgment, which he had grown to respect so highly, had betrayed a flaw. The doctor had signed on this brave, intelligent lad together with his group of unscrupulous fortune-hunters. That little error in his plan would prove his undoing. He, O'Grady, would see to it.

The three space-hands, Stitt, Grob and Minshall, were plainly enough just the ordinary men that Manvel had said they were. Yet, with their help, O'Grady might sail that big ship back to Earth. It would leave the Moon easily and, at the other end, he could brake it down with all rockets going full blast and so land without completely smashing the hull.

He was recalled from these meditations by the sound of a gong. The cook had prepared a meal. Back at St. Louis it must be well into the evening, and he had not eaten since early morning had reached that city. The men of the crew began to file into a room where a long table was set for them, but Von Rickopf appeared just then and drew O'Grady away.

"You shall have a place at the table in my apartment, with Lieutenant Guechemich and myself," he said. "I would caution you against too much fraternization with the crew. It does not make for good discipline, and our discipline must be of the very best."

The meal consisted of fresh meat, vegetables, bread and preserved fruits; and Von Rickopf, who carved, heaped O'Grady's plate high. Yet the detective ate of no dish until he saw his companions first taste it. The conversation was mainly between Von Rickopf and O'Grady, for Guechemich was still short of speech with his old enemy.

The orderly carried away the last of the dishes and brought cups of steaming coffee. Von Rickopf produced a bottle of brandy and O'Grady mixed a thimbleful into his fragrant black brew, but Von Rickopf and Guechemich poured out stiff drinks and drank them neat.

"You've seen only a sample of our findings, O'Grady," said the doctor suddenly. "Here, look at these."

HE lifted the lid of a locker and drew out a weighty sack made of soft, dark leather. He had to use both hands to hoist it up to the level of the table. Opening its mouth, he poured its contents clattering out in front of the detective.

For a moment it was as if a blinding flash of white flame filled the room. The table was covered with diamonds—diamonds for the most part roughly cut and polished. The light that fell from a cluster of bulbs overhead fell upon them, was caught and flung back, seemingly increased a hundredfold.

"Guechemich and I have cut these by hand, for sport," he heard Von Rickopf say, and the accented speech seemed to come from a great distance. He was swallowed in a fascinated contemplation of that blazing heap of wealth.

Was it real? His hands crept forward, picked up two fistfuls of the stones. No illusion there; they were hard and heavy in his grip. What was unfamiliar was their

tremendous size. Such gems could not exist, he told himself, were never heard of except in the Arabian Nights and kindred fantastic legends. But the testimony of his eyes to these riches, unthinkably real and precious, could not be denied.

"Here is the prize of the group," said Von Rickopf again. His hand came into O'Grady's line of vision, blurred as if seen through a veil, yet the gigantic jewel it held was shockingly vivid. It was as large as a baseball and as brilliant and white as ice in the sun.

"It is larger, far larger, than the Cullinan was before cutting," came the doctor's voice. "Its value cannot be computed."

That was the truth, O'Grady knew. But into his rapt consciousness stole a new thought. It was as if an inner voice, quiet but authoritative, bade him be wary. This display was deliberate—he was being tempted in order that his forced allegiance be made binding.

A revulsion swept over the detective, and he all but flung the diamonds from his two hands. Controlling himself, he laid them gently back on the table. He turned his pale face upward. Von Rickopf and Guechemich were watching him intently.

He permitted his lips to twitch and his voice to shake as he said softly, "They're more beautiful than anything on Earth."

Guechemich instantly began to sweep the diamonds back into the bag. Von Rickopf smiled ingratiatingly, and clapped O'Grady on the shoulder in his favorite gesture of good-will.

"And more valuable than anything on Earth, my friend," he said. "Think what your share will amount to when all is settled!"

O'Grady smiled back, but put the thought from his mind. He was not used to being swayed as he had been in the past few minutes.

His glance wandered to a paper-littered desk against the wall. Upon it was an open book. Rising as if in idle fashion, he crossed to it and picked it up. It was bound in blue, like a government publication.

Guechemich rose also and started quickly toward him, but Von Rickopf halted the bearded lieutenant with a wave of his hand.

"Why shouldn't O'Grady see it?" he queried. "Surely he's heard of it—the plan of the voyage to Venus."

Still with the idlest of motions, the detective leafed through the book. There were mathematical formulae, intricate diagrams, the computations of a whole generation of Earth's chief authorities on astronautics. To a trained space-engineer it was comprehensible, to a novice it would be an unknown language. Without it no one could hope to make the interplanetary flight with success and safety.

"This is a little too intricate for me," he lied. Then he set the book down and turned toward the door as if to make his departure.

But Von Rickopf held up a protesting finger and shook his head.

"My dear O'Grady," he said, "we have plenty of liquor here. Since this voyage to Venus will never take place, there is much we will not be able to use. Surely we could be forgiven if we relaxed, let us say—for the next few hours?"

But O'Grady demurred. He drank a farewell glass of brandy with the two Germans and withdrew. As he closed the door, they were toasting each other in fresh glasses.

In the hall he met young Manvel.

"You're to bunk in the radio shop with me," said the latter. "That's good luck, for we'll be alone to make whatever plans we can. There's another cot already set up. Come along, and tell me if you've thought of a way out."

"There's a way out, all right," O'Grady assured him. "It looks like a pretty narrow way, but I think it'll stay open. I'll tell you more when we're alone."

Inside the radio shop they sat on the edge of Manvel's cot and talked in low tones for some time. At the end of their conversation, the young radioman enthusiastically wrung O'Grady's hand. In his youthful imagination the project suggested by his comrade was already successful.

Then Manvel turned in, and dropped off at once into quiet sleep; but the detective, older and less sure of life's compensations, lay awake for hours, mentally reviewing and elaborating the features of the desperate chance he meant to take. With labor and luck he might avoid death and dishonor and at the same time bring Von Rickopf's well-laid plan of rebellion to the grief he felt it deserved.

SO closed the first of the five days which must elapse before Von Rickopf turned into ashes all hopes of an interplanetary passage. During the three days following O'Grady said little but observed and did much.

He visited the space-ship again, this time with Von Rickopf as companion. He observed at more leisure the equipment of the living quarters. He looked at weapons in the small arsenal, fingered the controls with a show of absent-mindedness, and dipped into a book that he found in a drawer of a desk.

"Do you want to read that? Take it back with you," suggested Von Rickopf.

"I'd better not," said O'Grady. "To tell the truth, we'd be better off carrying things to this ship instead of away from it."

"Why? What do you mean?"

"As the time for our supposed flight comes near, there must be a hundred telescopes trained on us," explained O'Grady. "All the newscasting agencies, for instance, will be watchful. So will the government and university observatories in all parts of Earth, and also a number of amateurs. With the aid of the photo-cell equipment, they can see us very plainly. They might be wondering why we aren't loading supplies."

Von Rickopf considered a moment, then nodded his head. "You're right, O'Grady. And I'll give you the job."

The detective chose a detail of men and began bringing crates, kegs and cans from the underground storehouse of the base. For hours they worked, hoisting these things into the luggage-hold, which was placed forward of—or, with the ship in its present upright position, above—the living quarters. Soon he had enough food there to supply a crew of twenty for three times the forty days which experts said would pass while the ship made the journey to Venus.

This job completed, he set Stitt, Grob and Minshall to keep a stealthy watch on the ship. Then he slipped out to his own dismantled rocket racer and from a locker that Von Rickopf's men had overlooked drew a black leather case. It held something he seldom travelled without, something that had been of use many times. It was stoutly made and fastened with a combination lock of more complex make than one would expect to find on such a piece of luggage. This case he smuggled into the radio room where he bunked with Manvel and hid it under his cot.

In the meantime Von Rickopf was superintending the task of laying a metal pipe from the fuel warehouse to the ship. Parallel with it ran an insulated wire, the end of which was fastened to a small fuse, inside the lowest

storage tank of the ship. The far end of the wire connected with an electric switch in Von Rickopf's apartment.

"That is what will wash our aspirant to space-travel away," the doctor said to O'Grady.

On May 3 pumps began to force the fuel, liquefied hydrogen and oxygen under tremendous pressure, into the ship's storage tanks. For more than twenty hours this continued until all receptacles were filled. As May 4 was dawning in St. Louis, Von Rickopf sent two men to guard the interior of the ship until the time set for the explosion.

But, as they entered the hull, they found themselves confronted by levelled guns in the hands of three of their supposed comrades. Grob, Stitt and Minshall put them through the manhole into the living compartment, from which all weapons had previously been taken. Back in the underground camp, Von Rickopf was at the television, sending back to Earth the assurance that the voyage would soon be under way. O'Grady seized an opportunity to talk to Manvel.

"Can you get everybody away from Von Rickopf's apartment?" he asked.

Manvel nodded. "Yes, I'm ready. I've pried a leak in a far corner, and air is rushing away into space faster than our machinery can make it. Everyone will rush to fix it when I give the alarm. It will take some minutes, anyway. How long will you need?"

"Long enough to take one blue-bound book from Von Rickopf's desk."

"You're still determined, then?"

"Yes," said O'Grady. "We're going to Venus. We are five, and we have two prisoners—seven men will be enough to keep the ship going. We could shoot on back to Earth, but we'd surely crack up, what with our added weight of fuel. In any case, we couldn't rise from Earth's surface again. I was sent here to keep the project from being delayed any longer. I'm going to do my work."

"And I'll help you!" cried Manvel in boyish enthusiasm. He walked quickly away, and in a moment O'Grady could hear his voice, sharp with simulated terror, calling for Von Rickopf.

At once the doctor answered. Then came a series of sharp orders, and men ran past from all the passages and compartments. O'Grady heard them working noisily somewhere, and then walked briskly away to Von Rickopf's quarters.

The door was not locked. He entered and found the room unoccupied. The book he sought was not in sight, but he found it in the first desk drawer he opened.

The feel of it in his hands gave him a sense of power and victory. It represented so much effort, so many dreams, such a volume of brain sweat. He would steer the ship for Venus, yes; but those others, some of them dead for many years, would have an important share in that work and would surely be entitled to part of whatever glory came as a result.

But the door opened again. Looking up, he saw Guechemich, his face knotted in a scowl, his jaw thrust forward aggressively under its thatch of black beard. The lieutenant closed the door behind him.

"What's happening, O'Grady?" he challenged. "Put that book down. What do you think you're going to do?"

O'Grady laid the book carefully on the desk from which he had taken it.

"I know what I'm going to do, Guechemich," he said. "I'm going to kill you!"

At the same moment he bounded forward and grappled with the other.

CHAPTER IV

Deception and Flight

AT first grip, the two combatants found that they were of nearly even strength. Each was well-muscled and in splendid condition, each was a skilful boxer and wrestler. Guechemich had learned his skill in the gymnasium of a German university, O'Grady had acquired his as a part of his police training. The detective had a momentary advantage with his underhold, but Guechemich exerted all his strength and pulled away.

The bearded lieutenant did not try to run. He liked nothing better than the prospect of settling his old grudge with his assailant. He ducked the swinging smash O'Grady launched at his head, retaliated with a stiff right and left to the stomach and closed. Hugging O'Grady closely, he hooked his leg back of the detective's knee and threw his weight forward. Down they went with a heavy thud, but in falling the detective twisted so that, as they landed, he was to one side instead of underneath.

Guechemich tried for a punishing strangling hold but O'Grady, elbowing him in the face, avoided the grip and rose to his feet. The other struggled upward, to be met with a straight right in the face before he was well on his feet. As he staggered off balance, O'Grady's left chopped him under the ear and dropped him to his hands and knees.

Dazed but not out of the fight, Guechemich lunged forward and tackled his enemy around the knees. Again the two of them crashed down, rolled over and over. Guechemich's thumb nail sought O'Grady's eye, missed it by a hair's breadth and tore open the eyebrow above. Blood spurted from the wound, half blinding the officer, who cupped one hand between Guechemich's hairy jaw and shoved him violently away while with the other hand he wiped his eyes.

They rose once more to their feet, and for a split second regarded one another warily. A third person would have been astounded in the resemblance between their creased brows, their flashing eyes, their dilated nostrils. Guechemich's bared teeth gleamed through the bristling black beard that covered the rest of his face, and O'Grady's cheeks were flushed almost as deeply as his florid adversary's.

It was Guechemich who took the offensive, springing forward with both hands whipping in toward O'Grady's mid-section. The latter clinched as a pugilist clinches, grasping the German's biceps in his hands and forcing them backward to render the blows powerless. Then, with all his strength he flung the other to his left, at the same time letting go with his right hand, knotting it into a fist and striking heavily at the angle of the jaw. Guechemich's head sagged backward on his neck and he flung up his crossed arms to ward off other blows while he recovered himself.

Perhaps O'Grady might have ended the fight then and there had not his eyes been filled with blood again. He had to stop and wipe them, and once more Guechemich escaped. This time, however, the lieutenant was not so anxious to renew the conflict. O'Grady had absorbed all the punishment he had been able to give, and, in turn, had twice staggered him almost to the verge of defeat. He looked swiftly around for some weapon.

Near at hand was a desk. In the top drawer, he knew, Von Rickopf kept a loaded automatic. Even as O'Grady came charging in, Guechemich dodged away from him and ran toward the place where the gun was. He jerked open the drawer, grabbed the pistol. Whirling, he jammed its

muzzle against the body of the oncoming O'Grady and pressed the trigger.

There was no explosion. The safety catch had been turned on. He pushed it aside with his thumb, but O'Grady had already caught the gunbarrel with one hand and the wrist beyond it with the other. A report sounded, and a bullet smacked into the ceiling. With a quick heave, O'Grady had Guechemich off his feet and threw him to the floor, landing on top of him. Another report rang almost in O'Grady's ear. Guechemich subsided.

The gun came away in the detective's hand. Quickly he rose, threatening his enemy with the captured weapon; but Guechemich did not move. The second bullet, turned against its sender in the grapple, had pierced his heart.

The door opened. O'Grady faced it quickly, and put down the gun when he saw Manvel.

"You've killed him!" exclaimed the boy. "What will you do now?"

"Plenty," answered O'Grady briefly. First he picked up the blue-bound book and handed it to Manvel. Then he stooped and caught Guechemich's body in his arms.

"Von Rickopf will be back at any moment, looking for him," warned Manvel.

"I'll see that he doesn't worry," said O'Grady. Carrying his burden, he hurried out into the hall and up the stairs toward the radio room, Manvel close at his heels.

Laying the body on his own cot, he tilted the face upward so that it was plainly visible in the light.

"Move that table over here," he called to Manvel. Reaching under the cot, he dragged out the black case he had retrieved from his rocket racer. As the young radioman pushed the table to him, he unlocked the case and set it before him. Inside its opened lid was a mirror. The body of the case was divided into compartments, which contained various articles of theatrical makeup.

"Would you dare?" gasped Manvel, divining O'Grady's plan.

"Of course I'd dare," said O'Grady. "I've had lots of more difficult disguises to work up. Once he tried to trade on our resemblance to each other. Now I'll do the same."

Already he had opened several jars of stain and was working a little from each into a mixture that had a dark flesh tint, much the shade of Guechemich's complexion. Quickly and skilfully he began to rub it into his face.

"See this jar of black dye?" he went on to Manvel. "Take the little brush and color my hair. Be sure you do a smooth job."

He had now stained his face to his own satisfaction and was rummaging in other compartments. He chose a wad of crepe hair and some liquid gum, with which he began to simulate a beard. After many comparisons between Guechemich's face and his own reflection in the mirror, he remodeled the whole fabric with fingers and shears until it was a passable imitation.

Manvel had finished with O'Grady's hair, and the detective took over the dye and brush to make his eyebrows blacker and thicker. He was as ready now as he could hope to be.

Rising, he shoved the makeup case away again, and pulled the covers of his cot over Guechemich, tucking them well over the lifeless head. Finally he donned his space-suit, all but the helmet, and put the gun he had taken from his enemy into a holster at his side.

"Do I look all right?" he asked Manvel. The other nodded, and O'Grady opened the door. Just outside was Von Rickopf, with a half a dozen of the crew behind him.

The detective's heart stood still, but apparently the disguise was adequate. The doctor addressed him in German.

"Where's the Yankee. He wasn't with us at the leak."

O'Grady understood, but he could not trust himself to answer. He pointed silently through the door to the silent figure under the blankets.

"Asleep, eh? Well, let him stay there. Close the door."

O'Grady did so. Von Rickopf continued. "The tanks are filled, the wires are in place. All we have to do is complete the circuit. As soon as I can get into my space-suit, you and I shall go for a final inspection before we order the guards away from the ship."

"*Ja wohl*," O'Grady made bold to answer. The doctor turned and walked away with his following. O'Grady tapped softly at the door and Manvel appeared.

"Get into your space-armor, quickly, and go to the ship," he told the boy. "Take the book with you. When I come, it'll be time to take off."

Before he went in quest of Von Rickopf, he put on his helmet. Not only did it help to mask his artificial beard and stained face, but it would forestall any more conversations in German. So attired, he followed Von Rickopf.

Von Rickopf was getting into his space-suit. O'Grady pretended to help him but, hoping to give Manvel a head start, in reality delayed the dressing as much as possible. At last the doctor was fully armored and together they emerged into the open.

They were alone in the airless crater of Theophilus. O'Grady was confident that nobody watched. Silently he walked by Von Rickopf's side, nerving himself to the final item of his program. Suddenly the other stooped to touch the electric wire that ran from the space-ship to the living quarters underground. He was off balance, and O'Grady went into action.

With a single buffet he sent Von Rickopf spinning and sprawling for yards across the surface of the lightly gravitated Moon. Then he reached down, caught up the wire and wrapped a loop of it around each hand. With all his strength he yanked at it. The insulation burst, then the copper wire itself. Carrying the loose end that led to the ship, he ran for the doorway that opened into the hull.

Von Rickopf had risen to one knee behind him and was drawing a pistol. Twice he fired. Something nicked a hole in the shoulder of O'Grady's space-suit and he felt the air whip away from his gasping lungs, but he was already hammering on the panel. It slid open and Manvel jerked him inside. With the radioman were Stitt, Grob and Minshall.

Opening the lower door that led to the controls, O'Grady hurried through.The two prisoners looked up at him from where they squatted. Fumbling with his heavily-gloved fingers, he struck the starting mechanism on the board.

A tremor seemed to shoot through every atom of the ship and O'Grady fell flat as it soared upward. He rose to see Manvel, who had crawled in after him, going toward the radio apparatus. He realized that it was now located, not upward, but forward. The apparent position of the compartment had changed, so that the floor was underfoot, the ceiling overhead, as they should be. The craft, now spinning rapidly, had instituted the mock gravity of centrifugal force as its designers had planned.

O'Grady seated himself at the control board and, throwing off his helmet and gloves, ripped away the false beard that had stood him in such good stead. Then he opened the blue-bound book that contained the computations for the voyage he was undertaking. He struck a series of keys to hold the ship to its temporary course, then walked forward to the radio.

"Get into the stokehold, you two," he ordered the prisoners. "You're members of my crew now. Minshall, take charge of them."

(*Continued on Page* 381)

THE WOMAN FROM SPACE

By **Richard Vaughan**

(*Illustration by Paul*)

The darkness ahead flamed into a leaping inferno. They plunged the disintegrating ray into the bowels of the dead world, boring a passage through its once molten heart.

THE WOMAN FROM SPACE

A YEAR of thanksgiving had been ordained for the respited world. For two generations, mankind had faced an approaching, and seemingly inevitable, destruction. Now, a short ten years after doom itself had brushed the Earth with its fiery fingers, and been turned aside, humanity, having mended the worst of the scars was celebrating its renewed lease of life.

In his living quarters on the lowest floor of the great observatory just erected on the table-land of Thibet; Dirk Sarrazin listened to the anthems of thanksgiving specially composed for this year of rejoicing. They ran as a theme through all the festivities and were broadcast from the great urban centers to the farthest inhabited confines of the globe. His mind reviewed slowly, for the thousandth time, the unforgettable drama of the last fifteen years . . . a drama whose pages he knew more intimately than most.

Sarrazin's grandfather had been the first astronomer on Earth to signal the approach of the distant runaway sun that was later to be known to the man in the street as the "Death." Before he died, he had charted its course through the heavens and warned the scientists of the world of its ultimate collision with our own solar system and the consequent destruction of the solar worlds.

Man had long foreseen this possible form of destruction for the Earth. Nevertheless, the information slowly and reluctantly given to his leaders, and after an interval, to all, of the fiery doom bearing relentlessly on them from the forgotten spaces of the skies, roused at first nothing but incredulity among the masses. Years passed before any but the scientific minds of the world paid it any heed.

It was Sarrazin's father who had persuaded humanity at last of the terrible truth of its approaching end. By then strange electrical phenomena, seismic convulsions, world-shaking storms and magnetic displays, had begun to prepare the lay mind for the facts. The invading sun blazed like a flaring torch out of the evening skies and our own sun, responding to its call, was reaching out toward scorched Mercury with long tentacles of flame.

Dirk had been born into a world frantically striving to hold to life as long as it might, yet hopelessly aware of its inevitable and imminent end. By then, the surface of the Earth had grown unbearably hot under the increasing activities of the new sun, and the great, all-powerful World Government, shortly before Dirk's birth, had set all mankind to burrowing like moles into the parched surface of the planet.

The power of disciplined humanity was so great that, in a brief time, the whole Earth had become an underground city where man fled in search of a few more years of life. Only at its poles did a few devoted astronomers still brave the torrid heat, their telescopes turned on the enormous, growing disc of the "Death."

Dirk Sarrazin had grown into boyhood and young manhood, through an existence alternating between such an outpost and its underground base. He had seen Mercury disappear into the great, fiery arms of the maddened sun, while distant Pluto warmed itself in an unremembered tide of flame poured forth from our parent orb. At barely twenty, with all his generation, he had counted on the fingers of his two hands the years still remaining for him to live.

Sucking at his pipe, as his radiophone filled his small room with the music culled from ten capital cities in turn, he recalled the first day that his father had asked him to check over calculations he had made regarding the Death. It was as though the old man dared not ask any stranger to share with him a new, tremulous hope, and suffer with him the reaction that would come if it should prove unfounded.

RICHARD VAUGHAN

IN the past few months, statements from competent astronomers indicate that beyond distant Pluto there may be other planets of the solar system. Indeed, if we can believe the more optimistic of the astronomers, the limits of the solar system may extend into space far beyond our present imagining.

How the sun could have obtained such satellites, whose distance from the mother might reach ten billion miles, is not known. And the planets because of their distance will be but faint "stars" seen in our telescopes. These two facts combined present the unknown planets in our minds as sources of mystery, wonder and endless speculation.

They may be inhabited if there is some source of heat upon the worlds; their inhabitants, like us, may be gazing into space surveying their sister worlds and wondering if they too have on their surfaces what is known as life. Through some cataclysm of nature we might even be brought into communication with these beings. Then there would open a series of interplanetary adventures such as our author has pictured here so well.

After that, and for months, they had scarcely left the almost unendurable observatory, save when their driven bodies gave out under the torrid heat. Dirk remembered how the flaming disc of Death had seemed almost imprinted on his eyes after those frantic days spent in questioning it. At last, their proofs could no longer be open to doubt and their news was given to the hopeless world.

The Death had turned aside; through what mysterious agency of space none knew. Now, day by day, it was hurtling farther away from our own sun; away into the immensities of the star-pricked void. Earth, released, had only some ten more years to wait before climatic conditions on its surface became once more endurable to its progeny. During that time, nature underwent all the terrific convulsions of readjustment. Earthquakes continued to rend and appall shivering humanity. Floods and tornadoes of devastating fury swept over the seamed and torn surface of the respited globe as the oceans, half vaporized into clouds, returned to earth.

BUT mankind, having faced dissolution for a generation, met these lesser cataclysms steadfastly, though even their underground cities paid them a terrible toll.

After ten years of waiting, great sections of the globe were deemed habitable once more, and humanity sprang eagerly to its task. The fauna and flora that had survived destruction at the polar regions and in some favored localities of the temperate zones, were transported to carefully replanted and scientifically protected districts. All the resources of a world-wide and united civilization were flung into the endeavor to recreate in a decade what had been destroyed by the breath of the approaching Death.

It was now ten years and four months since mankind had abandoned definitely its underground cities and re-established itself on earth. It was a shrunken remnant of a flourishing race, yet one that was stronger in spirit, more daring of mind and more united in a consciousness of world-wide brotherhood than before it had faced the Death. Its surface cities had been repossessed and science had suddenly flared into a productive brilliancy such as the world had never before known. In ten years, man had achieved more than in any previous century of human toil, and Sarrazin's gigantic observatory . . . set on the highest table-land of the peopled world . . . was one of the latest illustrations of humanity's renewed dominance of the Earth.

Sarrazin smiled and sighed as he puffed at his pipe. He had been born into a world fraught with such vast emotions, such experiences of life and death as to make the more usual hazards of existence, on a planet that was once again growing tame under man's hands, seem flavorless and small.

All the influences set about him since childhood had keyed his mind to respond to greater demands than were now made of it . . . unconsciously he felt the waste of his reserve powers in a world that was growing meek and well bridled by the might of man.

Six years before his father had died, wasted by his vigils in the torrid, observation post, having lived barely a hundred and two years of the hundred and fifty allotted to man. Dirk, who had followed in his father's footsteps, had succeeded him as one of the foremost scientific minds of the present era and the idol of the common people. For they had not yet forgotten those who had first told them of their salvation from the Death.

Yet Dirk was never happier than at this lonely post in remote Thibet, where his need for solitary reflection and communion with the mysterious immensities of the skies could be almost satisfied.

Looking at the hour indicator of his watch, he set aside his pipe and rose to waft himself to the topmost floor of the observatory by means of the electrical lift.* The weather indicator on the reverse of the small, platinum pocket-piece foretold cloudy skies within two days, and he felt the urge to investigate again something he had not yet satisfactorily explained to himself in the behavior of the two farthest planets of the solar system, Pluto and Neptune. He could conceive of but one logical explanation to their slight, orbital vagaries. Such variations from their orbits as he had observed could have had no possible interpretation other than the one he pondered in the past, before the passage of the Death. Now it was hard to establish what disorders of the solar system were or were not attributable to this wandering star. The figures and calculations on which most of the world's astronomical knowledge had reposed, were becoming almost useless. Sarrazin and men like him often felt that they were like sailors navigating an uncharted sea.

As he entered the topmost room of the incredible tower that human hands had erected on the Thibetan plains, a man turned from a great viso-phone installed in the wall and said:

"I was just going to call you, Dirk; Song-Pu-Tsenpa has a communication he has just received from a small chieftain in his locality, which he considers worth your attention. Will you take it while I get back to my job?"

He was an elderly, world famous, Chinese astronomer; a colleague of Sarrazin's father, and Dirk's companion at the Thibetan observatory. Song-Pu-Tsenpa of whom he spoke was a neighboring Thibetan nobleman . . . a graduate of the same (underground) seat of learning as Dirk himself, and a man greatly liked by both scientists. Walking to the viso-phone, the younger man turned the switch that lit the vision panel and smiled cordially at the stout Mongolian whose face appeared on the screen. They exchanged a few salutations, then the nobleman said that a small chieftain from the Himalaya foothills had ridden in a short while before to report that a strange aircraft had suddenly appeared above his village and still floated there without movement, and that it seemed manned by strange, blue beings unlike anything known on Earth. His people were in a panic and begged their overlord's protection.

"AS the description of the craft answers to nothing we know and is far too detailed to be a figment of the fellow's brains, I thought that you might find the matter worth a little investigation, my dear Sarrazin," he said. "The man's village lies much nearer the Observatory than it does to my own house . . . it is a bare ten minutes, no more, by rocket plane. A look at this strange craft might be worth your while."

Dirk's face lit with interest. "It is just what I need to rest my mind of figures and facts that won't fit each other, Song. I will get there by moon rise at the latest."

The old Celestial looked at him over his shoulder as he turned off the viso-phone. "Song-Pu-Tsenpa gave me a description of his man's impression of the craft. It must be a new discovery. Out here we are not always in touch with the latest departures of mechanical science. Tsenpa says it appears to be an eight-sided cylinder of a new, green metal and with no visible evidence of gyro-wings or rocket containers of any kind. I will check over our latest calculations concerning Neptune while you are

*Electricity was still used for ordinary household contrivances, though radio beams and controlled light-waves now activated most of the energy of the planet.

gone. Be sure to dress warmly for the night will be chilly and none of us are seasoned yet to the cold."

Sarrazin laughed. "How our forbears would have laughed at hearing us speak of eight degrees Farenheit as great cold. Do you know, Lo-Wu, I have an idea that the Death may have brought the world a new lease of life. We were heading, I have read in the books of the previous century, toward a new glacial age which is now postponed for many thousands of years. The sun has renewed its vitality and is probably as active as it was millions of years ago, when the world was young.

"The mean temperature of our day is what our forbears would have considered tropical heat, yet the noxious insects and reptile life which plagued our warmer climes in the past have been practically swept from the surface of the Earth, with most of our undesirable and therefore unpreserved fauna. Add to that the renewed fertility of our arable soil, due to the electrical cataclysms, the floods and consequent silting down of new earth, the vast fires that have swept our globe and the increased strength and abundance of the violet rays in our sunlight, and we can fairly feel that the Death has not dealt so badly with us after all."

The older man turned back to the sights of his immense telescope and frowned thoughtfully at the vision it presented him of blazing worlds set like pin pricks in the blackness of space. "I would not be surprised if it had left us something even more concrete as a reminder of its passage," he said. "I am growing, even as you are, more and more convinced that there is a planet out there that was never there before. Our sun may conceivably have stolen it from the outer fringes of the other star's planetary system . . . a thing not impossible according to speculations of the past. The only thing to shake my belief in its existence is the fact that, search as we might, we have never so far managed to locate it, despite the power of our telescopes."

"Think of the years it took to locate Neptune, not to speak of Pluto . . . though, it is true, that was some three hundred years ago when their astronomical instruments were comparatively weak. But I had better hurry if I am to return in time to get my sleep."

The pleasant breath of night lay over the Thibetan plateau, once dessicated and bare, but now returning to the luxuriant fertility of its prehistoric days. It was in such, once barren, places that mankind was rebuilding its world, since the great belt of the tropics was still almost inhabitable. At the small village of Drachetsang no lights showed, the people having retired to their houses and barred their windows and doors in their fear of the strange craft that floated above their dwellings.

From the crest of a neighboring hill, where his small gyro-plane awaited him, Sarrazin could make out the dark bulk of the aerial vessel hanging motionless against the starry sky. Turning the beams of the powerful, pocket searchlight he carried, on it, he caught an astonished breath. A great, green craft, in shape like a swollen cigar, reflected his light from a many faceted surface. It hung like a balloon, without motion.

As the searchlight played across it, a brilliant pencil of green radiance shot forth from the nearest end of the strange craft and swept, as though in answer, across the place where Sarrazin stood.

CHAPTER II

From Out of Space

DIRK stepped back into the plane and set his hands on the controls. One of his men handed him a modern heat gun, despite his protests.

"One never knows, master," he said. "True, there has been no war in the world since Man can remember; but there have been bandits, else why were such weapons invented? That is a strange ship up there, and safety is always a good investment."

Sarrazin laughed and accepted the deadly weapon before ascending. A slight touch on two corresponding dial knobs, and he was lifted almost silently in the air. At twenty feet above the earth, the edge of the Moon became visible as she slipped over the horizon . . .

Dirk wondered when mankind would have made her a part of his domain. Now, although travel through the world's stratosphere had long been feasible, and much used for swift transportation, no satisfactory means of propelling and fueling a ship through the void had yet been found. Rockets answered the purpose in a stratosphere, but it had been found impossible to regulate their propelling or braking powers in space. Ship after ship had crashed against the airless surface of the Moon, or become a doomed satellite of that dead world, before the approach of the Death had turned Man's thoughts away from the conquest of the interplanetary spaces.

A few seconds' flight brought Sarrazin to the great, green bulk of the poised aircraft. The Moon's cold light gave it a weird and ghostly sheen as it hung motionless and voiceless, five hundred feet above the earth. He hovered close to it a moment, then circled it slowly, before any sign of life became visible on board. The lofty, sleeping Himalayas whitely stabbing the night sky on his left, seemed no more aloof or withdrawn . . . the Moon above no more luminously colder. Dirk stared at the strange mass of green metal curiously. Suddenly a sound like the tearing of silk broke the voiceless hush of the moonlit heights. A large panel had opened opposite his plane, and a smooth, railless platform slid silently out from the flank of the ship, almost beneath his plane. From within a figure came forth and signed to him to land on it.

Sarrazin stared at it across twenty feet or so of intervening air. Fully visible, in a pale, cold radiance that came from within the great cylinder, it was no being of his world that faced him. It was apparently of a shape similar to that of an earthly being and was completely covered by a transparent, glassy envelope or suit, as supple as gauze. Through it a pair of enormous and brilliant eyes looked at him curiously. Its skin, where visible, was the loveliest, luminous blue that Dirk had ever seen, its features human in outline, yet strangely alien, as though the spirit behind them were of another essence and tempered in unknown fires.

Although standing a foot or so taller than his own goodly height, it seemed almost to float with an effect of airy grace instantly noticeable and arresting as though it was impervious to the influences of gravity. Yet a sense of power and authority dominated all its effects. Dirk stared at it for a full minute, then with a short laugh he switched on the radiophone of his plane and gave the signal for the Observatory's station. Lo-Wu's voice answered him immediately.

"What is it Dirk?"

"I think we have some extra-terrestrial visitors among us, Wu," Sarrazin said with another laugh. "I wouldn't be surprised if they were a scouting party from that new planet we were speaking of . . . this may be nonsense, but you and I know it is not outside the bounds of possibilities . . . and I vow that the being I am looking at now was conceived of nowhere on our old Earth. I'm going aboard to investigate, by invitation. It seems friendly, but in case anything happens here's their description to date."

He gave a rapid detail of what he had noted concerning

the strange craft and the solitary being he saw on it. Then he maneuvered his little boat so as to land it on the narrow, waiting platform. Those of his generation had become almost immune to fear, even of the unnatural. Alighting from the gyro-plane, he took a good look at the creature before him and his eyes sharpened in a purely esthetic admiration.

The delicate, luminous coloring of the being was indescribably lovely, and its features were, according to human standards, almost flawlessly regular.

Strange and immense eyes of a glowing, silver hue, heavily fringed with black, swept him with a glance as interested as his own; and from under a close-fitting cap, strands of hair resembling nothing so much as fine spun, black glass or gossamer threads of jet, curled in gleaming darkness against its delicately azured brow.

Obedient to gesture, Sarrazin followed it curiously into the great craft. Passing through two successive air-locks they came to a spacious central chamber that was lit by a soft yet cold radiance and furnished with wide benches and a few strange articles of furniture unknown to Sarrazin.

A GREAT control board ran across all one face of the room, and numerous lockers and smaller panels studded with levers and dials and wheels occupied the other walls. A small table with a luminous top was riveted to the center of the room and on its surface Sarrazin saw clearly depicted a view of the village below and a vast sweep of the surrounding country, now bathed in the flooding moonlight. A great stellar chart, more complete than anything known on Earth, covered all the space above the central control board and drew Dirk's eager and fascinated gaze.

The being gestured gracefully to one of the cushioned divans, and going to one of the lockers in the wall it drew out two strange, helmet-like contrivances, joined together by a fine, threadlike wire. Slipping one over its head it handed the other to Sarrazin, who imitated its example. There was a slight click and a strange, numbed feeling at the base of his brain, then a voice seemed to be speaking within his head.

"I come in friendliness," it said. "Give me please the atmospheric pressure of your planet and the chemical formula of its atmosphere?"

Sarrazin thought both answers quickly and the being nodded. Lifting off the helmet it disencumbered itself rapidly of the transparent envelope it wore and sniffed the air around it with a slight grimace, before assuming once more the thought-conducting apparatus.

"My instruments for ascertaining such things for myself were unluckily damaged when my ship hit your atmosphere," it said, or thought. "They will take me some time to repair. I am Lella of the planet Arion . . . a newcomer to your system . . . and I notice with surprise that life here seems to have developed along lines not dissimilar to ours— doubtless because your atmosphere and gravity differ very little from our own. What is the name you give this planet?"

Sarrazin laughed to himself quietly as his mind answered: "This is Earth. You are lucky, in a way, to have met first with a scientist like myself, to whom the existence of a new planet in our system and the possibility of space travel are things not wholly unbelievable. Where is your world? You have said it was a newcomer. Was it a satellite of the sun that passed so close to us twenty years ago?"

The being Lella smiled with its strange eyes, though its mouth remained grave as carved marble.

"Lo, being of Earth," it answered. "Arion when it saved itself from a fiery death, those many years ago, saved also your world and its sister planets from a like fate. My mind feels in yours an equal, doubtless your civilization is an old one . . . even as ours . . . so what I may have to say may be understandable to you. Did the star gazers of your peoples, a life time or so ago . . . or earlier . . . I do not know the life span of your world, realize the doom that was advancing on them in the shape of the sun from the outer edges of our galaxy, to which Arion once belonged?

"In our world, the fate that would destroy all the planets of two solar systems in one flaming holocaust, had been foreseen for more than two hundred of your revolutions around your sun. Our scientists had worked frantically all this time to find a way of averting what seemed an inevitable doom.

"As our years of respite shortened the way was, at last, found. The ray we threw against our sun to turn it from its fatal path, was over-strong however, and though it accomplished its aim of diverting the sun's course, so that it sped away from your system, it also hurled us away from our parent star and flung us into an orbit that curves in a vast ellipse around your sun.

"We are now between your outermost planet, which you call, I see, Pluto, and that other one your thoughts tell me is named Neptune. Ours is a cold and unfavored spot that is denied most of the warmth and light of the luminary that vivifies you. It has become apparent to us that we must either create permanently heat and light of our own, or use our ray to force ourselves closer to the sun. The latter course is the easiest for us, for we have greatly perfected that ray since first it thrust us forth to this new place in the skies.

"Before resorting to it we wished to ascertain whether it would cause disaster to any of the planets of our new system. Therefore, I and six other space fliers of experience were sent out to explore the neighboring worlds, and our report will prove the decisive factor in the orientation of our supreme council's plans . . ."

"There must be a great magnanimity of mind on your planet, for your chiefs or leaders to consider the welfare of unknown worlds as of equal importance with your own. Do you not then consider conquest or warfare rightful weapons in a struggle for survival on your planet?" Sarrazin asked curiously with a keen glance. The Arionan's face grew even graver than before.

"Earthman," its thoughts flashed back, "you speak of emotions that have, alas, not been unknown to us in the distant past! But not even for its own survival, would Arion now wage war in any form. Rather would we hurl ourselves out into the void, in search of a new sun . . . a thing already considered. War has harmed our world too greatly for us ever to forget its lessons. Tell me, do you on this pleasant Earth, still wage wars between yourselves?"

SARRAZIN answered that Earth had renounced wars between nations for two hundred years, though the Earthman's mind was not yet as opposed to the thought of war as that of the Arionan appeared to be. With a glance at his timepiece, he remembered the men who awaited him without, and Lo-Wu, possessing his soul in oriental patience at the observatory. He was eager to have his old friend and companion see this stranger from the outer void, and the marvels of scientific inventions, glimpsed in his trained survey of the great, green space-ship's control room.

Turning to the luminous, blue being who conversed with him, he invited it to accompany him to the Observatory,

where it could learn more about the things of Earth. The silver eyes looked at him searchingly, while he could almost feel the powerful brain behind them probe his own mind. Without answering immediately the invitation, it asked a few questions about earthly methods of communication, and moved over to a small panel set above a dial board in the wall. It was, Sarrazin found, a wave broadcaster equipped with a vision screen not unlike those of Earth.

A few minutes spent experimenting with the dials, taught him how to use it, and Lo-Wu's worried face appeared on the screen. Dirk reassured him briefly; then flashed instructions to his men without not to await him. Turning around, he found the Arionan seated at the great control board. Resuming the thought transmitter, whose other half was still on the Arionan's head, he urgently repeated his invitation to come as his guest to the observatory. The other appeared to reflect.

"Your atmosphere, though slightly unpleasant to the nostrils, is apparently harmless to my constitution, and I can feel your friendliness. I have only a short time to tarry here on your Earth, though I shall undoubtedly come back for a longer stay once my mission is discharged . . . A planet having a form of life so resembling ours must necessarily attract all the interest of Arion . . . meanwhile I will accompany you to your home with pleasure."

As it spoke it had been manipulating a variety of dials on the vast control board before it; now Sarrazin felt the great ship move slightly under him, while a quick glimpse at the reflector set in the table near him showed him the moonlit landscape slipping away beneath them at a dizzying speed.

"Your boat has been brought into the ship by the withdrawal of the platform without," Lella said, "and we will be at your dwelling within three turns of yonder time measurer." Over one shoulder it explained briefly: "I located its emplacement when you spoke to your friend a few minutes ago . . . a simple matter."

Dirk sat down and watched the Arionan with extreme interest; everything in the space-ship's central chamber excited his utmost curiosity and he promised himself a complete inspection of each device there on the morrow. The friendliness of the visitor from space was too obvious to doubt; it was hard to think of it as other than a human being, despite its strange and beautiful coloring. After a minute's silence it asked: "Tell me, are there two sexes on your planet as on ours?"

"Why, yes," Sarrazin answered in some surprise. The Arionan swung around in its seat.

"And have you many men?" it asked. Dirk answered that since the cataclysms, that for twenty years had punctuated the era of the Death's passage near them, there were, alas! many more men than women on the depleted Earth; the weaker sex having succumbed in greater numbers to the terrible hardships of those times.

The silver eyes of the being from Arion flashed wide. "You yourself are then a man! In our world one sees none but women. The men are so rare as to be considered too precious to expose to the hazards of every day life. How happy your planet must be! With us, only one woman in a thousand may mate; and even then she can only keep her husband five years, unless he expressly refuses to leave her, for which he is considered unpatriotic.

"Only one woman in a thousand can be a mother . . . yet once we were evenly matched of both sexes. That was before our civilization had evolved to what we call maturity. Though I have long since emerged from childhood, I have hardly ever talked to a man before . . . and there are none on Arion who can talk on equal terms to a woman as you do. Are all your Earth men such as you?"

Sarrazin's eyes opened as the conception of a dominatingly feminine planet, infinitely distant, yet a part of his own solar world, dawned on his mind for the first time. The undeniable beauty of the being from space seemed more natural now that he knew it to be feminine. Although Earth had not lacked for brilliant women in the last few centuries, he found it hard to believe that the virile power of the mind he found dealing with his could normally belong to a woman. That a being who could navigate alone and undaunted the boundless realms of space could be, even though of a different race, one of what on Earth was called the gentler sex. He said or rather thought:

"I must answer by saying—are all Arionan women of your type? Here our women are sheltered . . . even as it appears you shelter your men . . . they are also physically weaker than we, and the greater hazards of adventure are reserved for us. I can see that it would be interesting for an Earthman to visit Arion, where a situation so evidently the opposite exists."

CHAPTER III

An Unusual Invitation

LELLA turned to him with another smiling glance above sculptural, grave lips. "Would you like to brave the void and return with me, man of Earth, and see for yourself what Arion is like? It seems to me that there should be much to make our two planets friends; it is not often one finds a similar evolution to our own on other worlds. Our records show no other case, and our interstellar travels date back a hundred of our revolutions about our ancient sun, a space of time represented by ten thousand of your own revolutions about your luminary.

"My world would welcome a representative of yours, and would, I think, teach you much that you might appreciate. Despite the equal mind I meet in yours, a mind so similar to that of an Arionan as to make me wonder at nature's remarkable duplication of a species. I sense from some of your thoughts that your civilization is not quite the equal of ours, is perhaps younger in evolution."

Sarrazin said, "I have duties here . . . yet you make me a tempting offer, Lella of Arion. To an astronomer such a trip would be as a dream realized; it is a thing I must ponder a while however. Ah! Here we are! You can land your craft on that level plateau in front of the Observatory . . . you can see it in this table finder."

Lella said, "I see it; I have a smaller view-screen in front of me . . . the table is only for passengers."

They sank slowly down to earth and the Arionan woman said over her black-clad shoulder, (she wore a close fitting, trousered suit) as if in comment on Sarrazin's earlier remark . . .

"Women do everything in Arion . . . that is what war did to us hundreds of years ago . . . I will tell you about it later, your world will perhaps learn a lesson from our dearly paid experience . . . But I may not tarry longer than is necessary to learn about this planet. Lo! There is your friend whose face appeared on the screen; is it also a man?"

Lightly as a feather, the great space-ship settled on the ground, and a section of its wall slid back to allow the platform, still bearing Dirk's gyro-plane, to touch the landing field where a wide-eyed but impassive Lo-Wu awaited them. Amid shrieks of terror the Thibetan ser-

vants of the Observatory fled as the azure-skinned visitor from space emerged from the green cylinder.

Lo-Wu took the thought transmitter from Sarrazin and plunged into a deep thought conversation with the Arionan as soon as they were indoors. The latter looked curiously about her, but refused refreshments of any kind, saying that the food of Earth might not suit her as well as its air.

In the room of the great telescopes she paused to give the eager Lo-Wu the exact location of Arion on the stellar maps, as well as other information about the planets she has passed on her way to Earth. After she had retired to her green space-ship for rest, Sarrazin and his companion returned to the top room of the Observatory that was flooded with the light of the moon, now at its zenith. They talked late into the night, with glance often turned to the starry heavens above them. At the end, and after a long silence, Sarrazin turned to his friend with a thoughtful brow.

"Lo-Wu, I am minded to accompany this strange woman-being to her distant planet; that is, if you think you can carry on here without me, and if you approve my going. Think of all that I should learn of the stellar spaces on such a trip! I do not know what power actuates her space-vessel, but that it is sufficient to the demands of interplanetary travel is evident. When you see the ship tomorrow you will agree with me that such a trip, however unbelievable to unscientific minds, need not be unduly dangerous. And if I should return safely, it would prove of untold scientific advantage to the Earth. I would probably be able to bring back with me some of the vast knowledge and power these Arionan beings seem to possess . . . Think what a world it must be that produces feminine creatures such as this Lella!"

The old celestial nodded. "I will not oppose you, Dirk. Both for the world and yourself there would be profit in such an adventure. Here is but routine work compared with what you might achieve out in interplanetary space; and there is too small a scope for such a mind as yours. The people of this new planet are, by all appearances, of a benevolent mind . . . that they are more advanced in civilization than we are is evident.

"You and I are considered two of the best minds on Earth; yet this woman from Arion can, if I judge from my brief exchange of thoughts with her, surpass us in knowledge and probably in general mental development. I must ask her to let me study the principle of her thought transmitter tomorrow . . . it particularly intrigues me. We have come close to the principle of it once or twice before here on Earth, I believe . . . It is evidently a method of selecting and intensifying thought vibrations and transmitting them in the form of mental images to another mind—a very sound idea for a traveler to distant worlds.

"Well it is something to have concrete proof of what a few like us have always believed in, that is the feasibility of space travel. Who knows? If the Death had not given us something else to think about, we might have achieved it ourselves by now. But we should get to our beds if we are to get any sleep before morning."

NEXT day the woman from Arion led them, equipped with thought transmitters, through all the spacious interior of the great liner of the skies.

"You are scientists," she said, "and such things will interest you. Many things are too complex for the thought-helmets to make clear, but what I can explain to you I will. Knowledge to your kind is more valuable than wealth, and as you have received me with a generous friendliness, I give you what I can of it . . . In exchange I will ask you, by and by, as much information concerning your planet as I can file away for the Council in Arion awaiting my return. They are in need of all the knowledge space fliers can bring them."

She showed them how the ship was constructed of shell after shell of the strange, green, infinitely hard metal, mined and worked on a satellite of Arion. Each shell was set inside the other and the spaces between were divided into a multitude of air-locks, operating one and all from the central control panel of the main room. At the heart of the cylindrical green mass were six communicating chambers, each identical as to outfit with that one Sarrazin had seen.

"Each of these compartments are space-ships in their own right," she explained. "Each of them could navigate, if necessary, the distance between here and Arion. As you see, they all have replica control boards on their walls. The *Muta*—that is the name of my ship—could be sliced into half a dozen pieces, or pierced a dozen times by meteors and yet survive, partially at least, and serve to bring its pilot to his port. One woman can run such a ship . . . if she has had the training.

"There are only a hundred of us however on Arion who are so qualified . . . yet if needed, it can carry a crew of thirty in comfort. We manufacture our own atmosphere and could spend years in the void if necessary. Our scientists maintain that a space-ship such as the *Muta* is in reality a little planet of its own, entirely self-sufficient and independent of its mother world."

The green metal, they found, could be rendered transparent if necessary from within; though this took a great expenditure of power and was only indulged in for purposes of astronomical studies, or, Lella added sadly, for the needs of warfare in the old days. Usually, the device that reflected the world outside on the crystal top of a table and on a screen above the control board sufficed for all steering and maneuvering purposes. The main motive power of the craft was a modification of the cosmically powerful ray that had turned the original sun of Arion from its path of destruction.

It could be held down to a bare needle line of delicate force, barely sufficient to move the *Muta*, or released into a blast of power capable of hurling the ship through space at a speed beside which the speed of Earth ships was as a tortoise's crawl.

Lella showed them also a thin tube and explained that this was an atomic disruptor, a weapon of offense terrible to think of, and that there were a dozen ray-guns of this kind set in the sides of the *Muta*. Each was capable of dissolving matter as instantaneously as flame melts butter. The temperature of the vessel, once in the absolute zero of space, was regulated partly by reflectors that could be moved to the side of the ship facing the sun, partly by machinery that continually disrupted and rearranged the atomic structure of a small amount of fuel. The fuel could be reëmployed almost continually and thereby feed power to a refrigerating system as well as one for heating the space-ship to any desired temperature.

They were shown space-suits that were air-tight and absolutely insulated against heat or cold, and great containers of condensed and synthetic food. Water was obtained chemically, for the *Muta* was outfitted with a chemical laboratory as well as a repair shop that made it practically self-sufficient and capable of attending to any damage it might suffer in space. Vital necessities such as a gravity repelling force and an atmosphere regulator, were duplicated in each compartment of the craft.

The transparent, supple envelope she had worn when Sarrazin first saw her was, Lella told them, an individual adjuster of gravity and atmospheric pressure as well as an air-tight suit. It gave more comfort and freedom of

movement than the heavier suits for the void. It could only be worn a limited length of time as the air within it was not renewable of itself. The strange green metal, they learned, was capable of being charged with a certain vibrational current which endowed it with the power of being a repellent for any small body, such as meteors or planetoids, and made it capable of automatically retarding the gravitational action even of a planet.

After they had seen every corner of the mighty ship, Lella connected her thought-transferrer to a small cylinder, fastened against the wall, and asked both Lo-Wu and Sarrazin to answer her questions concerning Earth in such detail as they might.

EFFICIENTLY she gathered all the information it was possible to acquire in so brief a time, on the configuration, history, customs and scientific advancement of Earth, and transferred it rapidly to the cylinders of her recorder. There it was preserved for Arion in two manners—by a plate that repeated vocally the thoughts of the machine, and by a printed record for filing in the reports of the planet.

Dirk told her that they had an invention somewhat similar on Earth, with the difference that it recorded the spoken word and had not as yet been perfected to act by the power of thought vibrations alone. For an hour, she worked in a silence broken only by her incisive questions. Then lifting the thought-helmet from her head, she sighed as though with relief and stretched her arms gracefully, in a gesture more feminine than anything she had yet done.

Loosening the tight fitting cap of silver that formed her head-dress, she let a gleaming mass of short, jet-like black curls fall down on her shoulders and smiled at them for the first time with her beautifully cut mouth. Sarrazin thought suddenly that never had he seen a being more completely lovely than this creature of blue and black and silver from an alien planet; nor one whose mind offered so powerful a challenge to his own. The more advanced intelligence of the Arionan civilization, as exemplified in this broad-browed, silver-eyed and graceful flier of the interplanetary spaces, seemed a challenge flung at terrestrial evolution to which Sarrazin's brain responded. At the same time a growing admiration for the Arionan visitor as a woman was beginning to disturb the equilibrium of his thoughts.

Lo-Wu watching him, smiled curiously to himself. The feminine planet of Arion and the preponderantly masculine Earth might, he thought, find much in common, were regular communications ever to be established between them . . . something he was now able to consider a not too improbable event of the near future. His scientific mind pondered on what Arion had to teach them, and he thought that the Earth was ripe and ready to learn from the older experience of the stranger planet.

Watching Sarrazin's keen eyes and powerfully modeled head and the restless intelligence of his every glance, he thought that there was no man better fitted to represent the human race on some distant world than his fellow scientist. Again, with his eyes on the woman from the satellite of the Death, he smiled subtly to himself.

Dirk Sarrazin's departure from Earth was made at dawn two days later, amid the screams of the mixed Mongolian and Caucasian attendants of the observatory. Under paling stars and the glimmer of the first, lemon-colored hint of day on the lofty white mountains to the west, the *Muta* opened the doorway in its flank for its terrestrial passenger. Lo-Wu and Song-Pu-Tsempa, who had flown over from his estates to see the strange space-ship, both gripped Dirk's hand warmly though in silence as he made ready to embark on the most daring and audacious adventure man had ever yet conceived.

In their eyes he was already more even than Sarrazin, the individual; he was Earth's ambassador to the farthest flung confines of the solar system. None but themselves knew or were to know it for a period of two years at least. This had been decided between themselves the evening before as the wisest course. Should Dirk return safely to Earth it would be sufficient time then to tell the world that the barrier of the void had ceased to exist.

As the first sun rays slipped over the eastern horizon, Sarrazin stepped on board the waiting ship. Lella's tall and imposing figure silhouetted itself for a brief moment against the open port. Her arm lifted in a grave and ceremonious gesture of farewell; then the entrance slid silently into place, and a minute later the great, green cylinder slowly rose. The solid earth beneath it seemed to crumble a little as the propulsive ray hit it, and the *Muta* sped upward, accelerating rapidly till it was lost to sight.

* * * *

Till they had left the Earth's atmosphere, Lella had little time to give to the *Muta's* terrestrial passenger. Seated at the vast control board, she kept the space-ship at a slow but steady acceleration till a glance at one of the indicators showed that they had passed beyond the thinnest outer veils of air. So far Sarrazin had looked down on a spectacle familiar to all of the travelers in the terrestrial stratosphere ships. Now the last hindrance to the fiery rays of the sun had been left behind and the black void blazed with innumerable stars, while the streamers and corona of their own orb flamed widely and blindingly against the sky.

Lella had steered a slantwise course that had edged them out of the Earthly atmosphere with the minimum use of their powers of acceleration. They had moved in the same direction as the rotation of the Earth, and Dirk's last glimpse of his planet showed him the last promontory of France and the sweep of the Atlantic outspread like a child's map beneath him.

Lella had turned on the current that made the *Muta's* metal hull transparent from within. And as she flung the space-ship into a prodigious acceleration that tore it away from the attraction of the spinning world below and hurled it out into space, Dirk had a last glimpse of the Earth receding behind them like a child's flung ball. A dust of meteors reeled and flamed through the blackness around. Then, in an agony that seemed to rend his very being to tatters and fling the weight of a molten mountain of lead against his gasping lungs, he lost consciousness and collapsed at his companion's feet.

CHAPTER IV

Toward Arion!

WHEN he came to himself, Lella had evidently fixed the *Muta* in its course, for she had left the control panel and was bending over him, with a small tube of pungent smelling liquid in her hand. She had just finished injecting some of its contents in his wrist and was now intent on making him breathe its powerful aroma.

A few whiffs of its penetrating scent seemed to make a new man of the Terrestrial. He struggled to a sitting position and looked around him with the dazed feeling of having just escaped from a strange form of death. Later he learned that the Arionans, bred to space-voyaging for generations, could stand a much higher acceleration than the people of Earth. Lella had felt no more than a great discomfort as she tore the *Muta* away from the clutches of the Earth. She had been overcome with regrets when she

realized how near she had come to ending her passenger's existence.

The space-ship was now hurtling through the interplanetary void at an incredible speed. Lella told Sarraxin, that the ship was still slowly accelerating and would only attain its necessary maximum of speed in another two days.

Till they had passed the moon, a livid, scarred and pitted world that flashed by them for a moment only, Dirk left his pilot to her task. A study of the scientific marvels on the *Muta* sufficed to keep him interested, and the wondrous view of the receding Earth and of the unveiled sun blazing athwart the skies could, alone, have held him in fascinated contemplation for hours.

The transparency that had been given to the hull of the *Muta* on their departure, had been switched off, and only the crystal mirror of the center table and the screen set above the control board, showed a view of the strange, black void where they fled with the pulseless speed of the cosmic rays around them. When the Moon lay like a livid ghost in their rear, Lella gave Sarraxin his first lesson as a space pilot, since he insisted on taking his share of the piloting of the interplanetary flier. His keen brain mastered almost immediately the complexities of the great dial-board, and after an hour's tuition, Lella told him that she could safely leave the ship to him whenever she felt the need of a few hours' sleep. When alone, she said, she slept only in brief, half-hour snatches and found this the hardest part of any lone space trip.

Aside from the necessary time required for their brief meals and short periods of sleep, and the moments spent at the controls of the *Muta*, Dirk gave every moment of the next few days to his astronomical observations of the heavens around them. The *Muta* was equipped with powerful telescopes that brought even the most distant suns of the galaxy near enough for observations that had never been considered possible on Earth. He was in an astronomer's paradise, and his waking hours were all too short for his observations and notes.

Lella looked at his fervor with a sympathetic eye. What he saw for the first time was an old spectacle to her but it had never ceased to fascinate her. From her experience of the interstellar abysses, she drew small driblets of information to aid him in his calculations. Thus, it was not till dying Mars lay far in their rear that Dirk found time to tackle the next objective he had set himself . . . the learning of the Arionan tongue so as to be free to dispense with the tiring and limiting thought-transferrer.

Once one is attuned to the life of a space-ship, the days and nights cease to be. Time is not, save for the punctuation set on the marginless pages of existence by the desire for food and sleep. The human mind must either sink under the unnatural condition of a limitless day, or grow and strengthen to meet this foretaste of eternity. Those minds which could successfully answer this insidious challenge of space felt their capacities increase, their thoughts become more lucid as extraneous influences waned and the routine of mere existence occupied less and less place in the hourless flow of time. Earth was to learn later of this distinction between brains that were made for an earth-bound existence alone, and those that could stand, and even profit by, the terrible demands of space. Many a tragedy occurred before a means of distinguishing one type of mind from the other was found.

In these days spent hurtling through the void, Dirk Sarraxin found his mental capacities increasing visibly, as though Earth had cramped them in too narrow a confine. They found here, for the first time, the space necessary for their proper growth. To him, as well as to the Arionan woman with him, learning each other's language was child's play. But even when they could understand each other clearly, there was so much of scientific interest in the various mechanisms of the space-ship to discuss and elucidate, that it was not till the *Muta* was speeding toward great Jupiter, with the asteroids far in their rear, that Dirk remembered to ask his azure-skinned, silver-eyed companion how it had come about that Arion possessed so few men.

THE *Muta* had been set on a course it could follow for days without more than a cursory attention from its pilot. Dirk had grown used, by now, to the sensation of almost weightlessness that had accompanied the cessation of their earlier acceleration. This was partly counteracted by the specially magnetized shoes and garments which they wore, that clung to the metal floors and seats and gave them stability of movement. Yet a sudden movement could still send them bouncing upward like a rubber ball. Lella barely dented the cushions of one of the benches as she disposed herself more comfortably upon them and turned her brilliant eyes towards Dirk.

"It must, I now realize, seem a strange situation to you, my friend Dirk," she said, "even as it seems . . . or seemed . . . the most bizarre reversals of roles, to find man occupying on Earth the dominant position we women of Arion have so long filled. History says that such a condition once existed on Arion in the distant beginnings; but to those of my generation a world full of men is something almost beyond our comprehension. As I told you before, on Arion men rarely appear in public. They represent our rarest and most precious national treasure.

"No Arionan man would have been permitted to venture, as you have done, on a voyage through space, and it has seemed continually strange to me to see a man daring the same dangers as a woman and thinking with a mind equal to hers . . . stranger, indeed, than if you had been some alien form of life.

"According to Arionan ideas, you are more like a woman than a man; I can see that you, with your Earthly conceptions, think I am more like a man than a woman. Our men are of a timid, slothful disposition; they are capricious and weak in capacity for endurance or action. Little is to be expected of them intellectually, though now and then they have produced a distinguished mind! In the very distant past, however, they were the rulers of our world and of a vigorous and inventive breed.

"History says that they lived for war and were forever hurling themselves into the carnage of battle; nation against nation (we were divided in that time into an infinity of little countries), and league against league. With the advent of scientific means of slaughter, the death toll became devastating, and suffering of such intensity was brought upon our planet, that the protests, long disregarded, of the women of those times . . . who had little or no word in the affairs of the states . . . mounted to a storm.

Then came a world war, where all the resources of science were used unmercifully. For years it lasted, till the boys in school had to be drafted, so that there should still be soldiers left to carry on the fight . . . and the slaughter. And when the boys who were still children were torn from their arms, the women rebelled. They, too, resorted to arms and marched in overwhelming numbers against their own armies.

"The war ended; but the male population of our world had been almost wiped out of existence. In the famines and disasters that ensued and held sway for three generations, the few male children born to those women who

consented to wed were the first to die, as though centuries of warfare had impoverished their vitality.

"The records show that at the beginning of what we call the warless era, there were fifty women to every man; also the women, partly through resentment against man, partly through pride in their new found dominance, for the seats of government were by then in feminine hands, had lost the taste for mating and the desire for children. Although this was only a partial condition, the historians believe it prevented polygamy from bringing a remedy of sorts to the situation.

"At that time, even the man among fifty women found it hard to mate; and with his loss of power and prestige, man seemed to deteriorate rapidly. They lived for pleasure and with a total disregard for their health. They plotted wars that would put them back in their former seats of dominance over the other sex . . . they fought against constituted authority and even among themselves, and died easily. Two generations later, when the women's government awoke to the gravity of the situation, there was only one man for every two hundred women, and the population of Arion had already diminished by over a third from what it had been after the final wars.

"Now, one woman in a thousand can hope for marriage, and as a man may marry twice or thrice, it means that there is, on Arion, one man to every two thousand women. Our population has diminished, of course, at an alarming rate. It is only one twentieth of what it used to be; and despite all the laws to promote a high birth rate formulated by the council, it is only by greatly lengthening our span of life and by practically eliminating disease and death among children and men, that we have been able to avoid total destruction. Indeed, despite the dislike of the higher classes for the idea, polygamy may soon be enforced by law as the only means of preserving our race."

SARRAZIN listened, with a fascinated interest, to this vivid exposition of what the curse of war had done to another and older world than his. As she stopped speaking, he studied Lella's classic features and luminous coloring thoughtfully. So far, a common interest in scientific matters had almost prevented him from thinking of her as a woman capable, even as the women of Earth, of desires and emotions.

The vague sadness in her voice as she spoke of the fate that condemned so many of her sisters to a solitary life, left him a prey to vastly different and disturbing feelings toward her. This Arionan woman, member of the sovereign sex of her distant planet, his equal in all that man claimed as his special qualities and his superior in civilization and knowledge, held and allured his interest as no woman of Earth had ever done before. She was a fellow scientist and adventurer . . . a mind he considered with respect, and an ethereally lovely feminine being, all in one. Considering her, he said gravely, "How are the few who may marry chosen from among so many?"

"By lot and only from the most perfect of our race . . . from those selected a man may choose his wife according to his will. The choice is his, but a woman is free only to refuse if she prefers not to wed."

"Have you yourself drawn lots for a husband?" Sarrazin asked with a slight distaste in his voice. Lella laughed.

"A flier cannot wed and tie herself to the planet. Among so many who wish to wed, those who have vocations as demanding as myself would be selfish not to step aside. Moreover, such mates as our Arionan men make have never appealed to me."

Dirk lit his pipe and smiled relievedly into the smoke. "Though your civilization is older far and wiser than ours, Lella," he said, "yet I believe you may find us of use to you . . . I think I can help your race solve this problem you speak of."

Jupiter and Saturn were far in the rear, and Uranus lay to their right, a bright marbled sphere, when Lella, calling on Dirk one day as he sat at the controls, pointed out to him a greenish disc that their telescope had picked out from the myriads of lights ahead, and said, "Lo! Arion."

Sitting beside him she described to him the Arion of the days before they had flung themselves away from their parent sun. They had been its only satellite and had moved around it in an orbit closely approaching that of the Earth around its own luminary. Though it was a drier planet than the Earth, yet Lella spoke dreamily, as one recalls childhood scenes, of luxuriant vegetation irrigated by synthetic streams; of lovely gardens and pleasant lakes; of snow mountains and perfume laden breezes.

"It is that we wish to recapture," she said, "now we live under roofs of transparent Colute, the material, you know, of which my gravitation-regulating suit is made; and use artificial sunlight to warm and illumine our world. Outside our transparent roofs, all is a frozen desert of ice and snow. Forests where I played as a child, are mummied skeletons of trees; the dwelling where I was born lies clad in ice . . . therefore, I was the first to volunteer to set forth on this exploration of the new system we had been flung into."

Her silver eyes misted as she gazed at the first, distant gleam of her home. In her emotion, Dirk felt her nearer him than ever before; his hand touched hers by accident, and suddenly he had both her hands in his and was drawing her close . . . nor did she resist.

"Would you take an Earthman for your mate Lella?" he asked hoarsely.

She trembled in his arms and her eyes answered before her words. Dirk caught her close and for a moment she was as feminine and clinging as any woman of Earth. She told him that she had loved him when first she saw him enter the central room of the *Muta*. After the weak men of Arion he had seemed like a demi-god and companionship with him through the endless day of space had shown her that here was that thing undreamt of on her planet . . . a mate who was an equal and a friend.

"Imagine what you are to me, whose mothers have known only the inferior men of Arion," she said, when Sarrazin told her what she was to him . . . all the things a man looks for in a man and all those he dreams of in a woman. Arm in arm they bent over the screen that showed the faint shimmering of Arion against the illimitable dark.

Suddenly, Lella uttered a sharp exclamation and tore herself away from Dirk's hold. In a fraction of a second, she had turned on the current that rendered the green metal hull of the ship transparent as glass; they seemed to float, enclosed in a bubble of air, in the night of space. To one side the shrunken sun blazed fiercely, hardly larger than an orange; to the right, Uranus was slipping away behind them; nothing at first glance seemed to justify Lella's sudden and frantic attention to the complicated control board. Then Sarrazin uttered a sharp cry! Immediately before them a vast patch of sky had been blotted out!

The mighty hull of the space flier twisted and strained as though in the grip of a titanic hurricane. Dirk realized that it was the repeller current, that had so easily deflected chance meteors and asteroids on their way, at work against some mass too great to be affected by its power. The

sensation was not unlike that of the unsuccessful braking of a racing vessel checked in full speed.

As they struggled in the grip of a power greater than theirs, Lella switched on dial after dial in frantic haste. Without turning she gasped, "We cannot use the propelling ray to ward us off . . . at this speed it would tear us to pieces. It's a burnt-out world! It is drawing us to it at treble our own speed! This is the end!"

Sarrazin flung one wild look around him and exclaimed: "Not yet!"

CHAPTER V

Through the Tunnel!

SPRINGING toward the switchboard of the narrow, atomic disintegrators set in long ray-tubes at the fore part of the vessel, and sweeping open the whole row of them, he called on Lella to swing as much of the propelling ray as she could safely use as a brake against the solid blackness that seemed to be hurling itself through space at them.

Only what was needed to gain them a moment's time, he said. As she did what he told her with the instant obedience of one trained to emergencies, he swung all the disintegrators he could align on one focal point, combining their terrific force in one irresistible blast. The darkness ahead flamed into a leaping inferno of yellow, red and purple lights, and seemed to dissolve into the flames of that mighty ray. Lella said quietly:

"It is no use; their range is too narrow to destroy such a bulk; this is the end Dirk . . . but at least we die together."

"Wait! We are not dead yet!"

With both hands on the dials that controlled the disintegrators, he bent forward tensely. Below them, as the burnt-out planet seized them and drew them down to her, loomed a terrible mass of seamed and pitted rock and metal, toward which they plunged at a speed beyond man's conception; drawn toward the dead and sinister ghost of space by a gravitational pull, that Lella's senses told her was beyond anything so far known in nature.

The terrific acceleration tore at her whole being, and Dirk seemed to have almost lost consciousness where he sat. Lella saw his face grow livid and contorted as he fought for breath against the terrible pressure exerted upon his lungs. Neither could move; now it was upon them and she waited, wide-eyed for the crash. A minute passed and they were still alive . . . engulfed in a solid night . . . the Stygian darkness of the heart of a world through which they tunneled! In front of them, the many colored rays flamed like living things dissolving the age old matter into dust as they ate a way through to freedom beyond.

The gravitational pull tore and twisted at the structure of the ship; but the acceleration had ceased. With a mighty effort, Lella twisted a knob, and turned on the gravity repelling power to its fullest strength—a thing never done before. The struggle between the *Muta* and the mass that attracted it immediately became a little easier.

For what seemed unending years, they plunged their disintegrating ray into the bowels of the dead world, boring a passage through its once molten heart, as an awl bores through soft wood. Suddenly they were free! The skies flamed with great, golden stars, and ahead of them the small disc of Arion beckoned them home.

Lella flung, almost automatically, her mightiest propulsion ray back against the foe they fled from. Once again at an uncomfortably increased acceleration, they tore themselves free of its attraction and fled outward into space. Dirk switched off the disintegrator rays and sat up painfully . . . behind them the tunneled, burnt-out world seemed to fall away into the void that was its grave. Lella fixed the *Muta* in its course once more and turned shining eyes on the Terrestrial.

"You saved us both . . . and my life is doubly yours," she said with pride. Dirk smiled a trifle shakily, the effect of the acceleration making him feel as though a steam roller had slowly crushed almost all the life and breath out of him. Only an immense effort of will had kept him from losing consciousness as on his departure from the Earth.

"It was our only chance," he returned. "That space visitor must have been of no substance known on Earth; did you ever see such a gravitational pull?"

"There is nothing like it on Arion either . . . it might, however, be of a substance similar to that which composes a small satellite of the star you call Sirius. It is no bigger than Arion, or your Earth, yet it weighs as much, or more, than your sun."

"Our sun," Dirk corrected, laughing through still contorted lips. "Yours and mine dear. I wonder what that wreck of space was? No planet could exist permanently within our system without our being aware of its presence through its influence at least on its neighbors. Could it be a moon of Uranus, one habitually in its shadow, and so unobserved from Arion or the more distant Earth?"

Lella looked doubtful. "I have flown around Uranus twice," she said, "and I can hardly see how such a satellite could have existed without our discovering it earlier."

"Then it might be some far-flung satellite of your own sun, stolen at the same time that Arion hurled itself into our system," Dirk remarked thoughtfully. "Was there any small planet attached to your luminary, with an orbit much farther away from it than your own? An orbit so distant that the pull of our own system might have torn it away as our two suns passed close?"

Lella pondered a moment. "Arion, as I have said, was the only planet capable of supporting life in our system—the only planet worthy of the name in truth—but I remember that our astronomers told us at our colleges, that there was a thin belt of planetoids circling the outer edge of our sky world and as far away from us as you are from Neptune. It is very possible that your sun captured one of them unaided during the great cataclysms, and that it is now circling around an orbit that has not before brought it to our attention."

THEY had no other adventures on their way, and another fifteen days found them hovering over a mighty, transparent-roofed city, as vast as a whole country on Earth, from which a series of air-locks rose, opening one into the other, till the outer surface was reached. As a ship goes from lock to lock in a canal, so was the *Muta* slipped from one great, bubble-like compartment to another, till it came to rest on an immense landing platform of silver bricks, still many stories above the city's thoroughfares.

Sarrazin was to learn shortly that silver was the most common metal on Arion, and that the people of the new planet had found a way of treating it, that gave it the strength and durability of steel. All the more ordinary constructions were built of it; while the more aristocratic dwellings were of a carved, milky crystal that was delicate and pleasing to the eye.

A crowd of luminously blue-skinned Arionans had gathered round the *Muta* as it came to rest on the landing platform. Dirk let Lella go out to meet them alone and, rendering the hull of the great space-ship transparent by a touch on a dial, he sat down to study the city below.

It was hard to believe that the Earth lay billions of miles away, across an abyss of space too immense for the average man's finite mind to conceive of; for here below him lay a scene, that seemed to differ from the spectacle of a Terrestrial city, only inasmuch as would two far-flung and different capitals of Earth. Yet, this held true only at first glance. Nevertheless, the great Arionan city was near enough to human conceptions of a mighty capital, to make Dirk ponder over the strange coincidences of nature that had made this planet from an alien system so closely akin to Earth.

Save for half a dozen gigantic buildings, like the one on which the *Muta* rested . . . buildings immense beyond any on Earth . . . the city seemed composed of low and garden-surrounded dwellings, divided by wide, silver-paved streets that were, Lella had told him, reserved exclusively for pedestrians or the rare wheeled vehicles of old, infirm, or very young. Above the roofs were the air lanes and between the greater houses long, slender, covered bridges formed a silver network of communicating passages.

The city stretched beyond the range of human vision, breaking into patches of cultivated soil, then resuming its spacious ranks of houses. Lella had said that there were four such cities on Arion, each protected from the outer cold by roofs of transparent Colute and lighted and warmed by the synthetic sunshine that played in great, pulsing beams beneath the thousand-foot high roof. Here, all that grew and all that lived on Arion congregated; crops were grown in an incessant rotation and cattle raised in great pens on the confines of each city, while fish stocked every stream and lake. It was hard to believe that this flourishing scene was set on a frozen planet, in the dark of the cold outer spaces.

The silver and crystal vistas of the city were exquisitely beautiful after the long space voyage, and Sarrazin sat in contemplation of them till Lella came for him and brought him out to a group of richly clad and imposing-looking Arionans. They were all of a tall and graceful stature, the smallest being hardly shorter than Dirk himself, despite his six-feet-one. Their delicately, regular features were cast, like Lella's in what Earth would have called a Grecian mold, though more chiseled than any Terrestrial features had ever been. The hair of most of them had turned a pale gold, the equivalent here of the gray or white locks of age, and their eyes were piercing, strong and full of vitality. They looked at Sarrazin curiously with black-lashed, silver eyes and gave him a grave and dignified greeting.

"It is an omen," said one, "that we should find a kindred form of life on a planet of this new system we have come to. You are very welcome to Arion, Earthman, and your presence will make Lella's return an event that may loom great in our history. I greet you in the name of the Council of our planet. Later there will be much for us to talk of together."

Attendants of the landing platform had taken charge of the great space-ship and Lella assured Sarrazin that his own luggage would be delivered along with hers at their lodgings. Taking leave of the officials who had come to meet Lella and of the personnel of the landing platform who crowded close around her, gave Dirk a glimpse of the working costume of Arion; tunics with skirts to the knees and long, tight-fitting, laced trousers ending in boots of a strange, metallic woven material.

Lella led him to a small, torpedo-shaped car that shot down an elevator shaft and through an underground tube to a spacious dwelling, a mile or so away from the lofty "Space-Tower."

There, in Lella's own house, he found himself surrounded with every known luxury of Earth and many unknown ones. A suite of rooms and a private garden filled with strange flowers and stranger singing birds of a metallic plumage, was assigned to him by her house-steward, or stewardess, and all the delicacies of Arionan cooking and fruits and salads were set before him for his first meal on the new planet.

FOR a week afterwards, Dirk saw little of Lella, as she spent most of her time in consultations with the ten mighty minds of Arion who formed its supreme council. If the decisions to be made were not so momentous, she told him, he would have been called before them almost immediately, since his coming and appearance were the main topics of Luscior at the moment. But now even visitors from other planets, a thing unheard of in Arion's history, lost their importance beside the consideration of their world's ultimate fate; just as even their love for each other, Lella said regretfully, must stand aside while the council still had need of her services.

Meanwhile, grave and courteous Arionan women were delegated by her to show him the city and to see that he was fittingly entertained. In a closed aircraft, that moved on one of the network of transportation beams that enclosed the whole planet, he went out into the terrible wastes of ice and darkness that stretched outside the protected cities. It was a vast and lunar country, lit by two diminutive moons, a frozen world that had once been as sunny and luxuriant as the pleasant Earth. The sun gleamed afar, hardly bigger than the Earth's view of Venus, and unproductive of heat or light; while the winds seemed to lie frozen like the soil and only the presence of an occasional working party, clad in space suits against the cold, relieved the emptiness of the scene, as they quarried or mined for the crystal and minerals needed in the cities.

Within the city of Luscior, all was warmth, light and comfort. The Colute roof held all the outer world at bay and Dirk swam in scented, flower-edged pools or wandered through a brilliant city full of artistic, as well as scientific marvels. One day, however, after many brief and unsatisfying meetings, Lella came for him from the recesses of her own apartment and told him that they would have this day in its entirety for themselves alone.

"Tomorrow," she said, "there will be a banquet in the honor of the three space fliers who have returned this week from their mission, and of myself. Unhappily, you cannot attend it, as no man has ever done so before in the history of Arion. Banquets are deemed no place for men. On the day after, there will be a great council of all the leaders, at which the course of action by which our world may find once more the blessings of the natural sunlight will be decided on. It has been considered unnecessary to await the return of the remaining fliers, as the reports of those of us who have already arrived have sufficed to indicate the course we shall probably take. I will see that you are invited to the council . . . it will be worth witnessing . . . only once before in the existence of our race, has the fate of all Arion itself hung on the words of our leaders. After that we shall all be harnessed to the accomplishment of a gigantic task. Perhaps I shall be sent out once more in the *Muta* . . . will you accompany me, Dirk, if I am? But that is for tomorrow! For today, let us be happy and live in the moment."

She was dressed in a rich garment of metallic tissue, with a carved circlet of ebony-like wood confining the spun jet beauty of her hair. Since the great cold had taken possession of Arion, twenty years before, wood had become so rare as to be almost a mark of princely rank or fabulous wealth on those who wore it. But it indi-

cated more often the former than the latter since, in Arion, wealth was so regulated as to make a fortune of comfortable proportions easy enough of attainment. Anything greater, however, could be held only at the will and with the proclaimed approval of the state. Thus attired, Lella's strange beauty was entirely feminine, soft and gracious, and Sarrazin did not regret his decision to accompany her to Arion, as she leaned against his strong shoulder with a deep sigh of contentment and happiness.

"Truly, no woman on Arion has such a wealth as I have!" she said. "For none of them have ever known the bliss of loving one towering as much above other men as you do. But come! We must first of all visit the men's college . . . I have never been there; it is not thought desirable that our young men should see too much of girls who are not among those elected as their mates, but the freedom of the planet is now mine as a reward for my late services. Then I have a dear friend who is married and lives in the Happy City . . . as the quarters of those who are married are called. I would like you to meet her. She has eleven children, a great family, even for Arion where large families are deemed a patriotic necessity, and she will shortly be awarded a medal at the next feast of the married."

Sitting close to each other, in the cushioned cylinder cars of the underground tube passages that served all Luscior, they flashed beneath the city till Lella turned their vehicle into one of the deep embarkation wells set along their course, up which the cylinders circled on twisting ramps to their destination above. On a vast hillside, gleaming buildings of the finest milky crystal, formed arabesques of a startling loveliness, set amid the flowered grasses . . . green, enameled with grey and copper colored flowers . . . of this new world. Silver flagstone paths led up a hillside toward them, and as they moved over them Lella explained how all the boys had to come here at the age of ten for their education and physical training; remaining there till the age of twenty-two, when they were allowed two years of liberty before they must make choice of a mate from the picked girls of the planet.

"For them, patriotism consists in keeping strong and healthy, and in being the fathers of vigorous children; their duty is clearly shown them, but nothing is spared that can make them contented and fit in body and mind. Gymnastics and sports of all sorts train their bodies and the best of Arion comes to train their minds. But almost invariably their bodies respond better than their brains to the care lavished on them; they are averse to effort . . . save in certain games . . . childish in their ambitions and prone to take pleasure in the lightest sides of learning only. Very few of them can be intellectual companions to their mates, though there have been one or two fine minds among them, who have, through their mates, greatly influenced Arionan history."

CHAPTER VI

A New World

DIRK smiled a little as he heard the last remark . . . one he had seen applied in ancient history books to a few great women of Earth's past; but he said nothing for an elderly and grave Arionan councillor, whom he remembered meeting at the arrival of the *Muta*, came toward them. After courteous greetings she led them to a great stadium, where boys of various ages were playing games or indulging in gymnastic exercises.

Sarrazin found them fine physical specimens, aglow with health and equipped with the best of manners. They were eager to look at him and hear of his world, but more in the form of an amusement than through a desire for knowledge, and they soon returned with an equal eagerness to their games. They were evidently light and volatile of humor and purpose, but as the aged director of the college asked him if the Arionan men differed much in character from those of Earth, Dirk smiled and said, "There is nothing wrong with yours that a century of responsibility and equal freedom would not change. Their interests have been so limited I take it, that they have lost interest in a world in which they have no voice, and have limited their passions to games and pleasure."

The old director said, "That, many of us see, is true. But our men are few and precious to us. They realize as we do that we cannot afford to risk them in the world of action where we women live. Physically, they cannot endure hardships that leave us unaffected, and each knows his importance to our world, and his duties as a future father, too well to resent the situation."

Leaving the college, they went in an air taxi this time—there were always many about, waiting for fares—to a pleasant place of great gardens set about a vast, green lake and embowered in the pale, silvery green of the rare Arionan trees. At one of the largest houses Lella presented him to a superbly beautiful woman who sat surrounded by a bevy of children, with a grave, tall man by her side. Norria, as the woman was called, welcomed them warmly, her husband looked at Sarrazin with curiosity and while Lella and Norria spoke of the former's trip across the solar system, he questioned Dirk in detail about the Earth.

"I would have given my right hand to have been in your place," he said. "All that we men can do is dream of such achievements without hope of ever sharing in them. Only in our old age are we free to do as we please with our lives; and by then we have lost the capacity for action or even desire for action and are content with our peace and security."

Sarrazin liked him greatly. Norria had taken the pains to awake his mind to matters usually left to the consideration of the stronger sex, and as a result he had grown to be almost her equal intellectually and had firmly refused to leave her for a new wife at the end of five years as was the custom. Dirk rejoiced at the proof Norria's husband presented, that the men of Arion were the victims of environment rather than of inherent weakness. He promised to see as much of Luthor, as he was called, as his sojourn on Arion permitted. The latter asked eagerly for more details of the emancipated men of Earth, and gave Dirk a glimpse of the Arionan men's reactions to their limited roles.

"We are shackled by our patriotism," he told Sarrazin. "An act of recklessness that forfeits a masculine life is almost a betrayal of our dwindling race. In the remote past, men tore Arion to pieces in their savage subserviency to war, and now we must justly pay the penalty for the long dead sins of our sex."

Lella came up and leaned against her lover's shoulder. "I have told Norria that we are to mate, Dirk. Will she and you come with us to that distant planet someday, Luthor? When your children go to the colleges and you are both free? I know that you are not as other men of Arion but dream of adventure as we women do. You would find kindred souls among the men of Earth and adventure in the trip over."

On the way home in Norria's luxurious flying craft (the married couples were granted princely revenues by the state in addition to their own private properties; in fact Dirk decided that marriage was the closest thing the Arionans had to profiteering he had yet seen) Sarrazin said, reflectively:

"If only Arion were nearer to the Earth, our men would solve your problem by falling in love with your beautiful women . . . they are surely the most beautiful in the solar system . . . A few generations of intermarriage between Arion and Earth would equalize somewhat the proportion of men and women here, and the situation would in the end become normal, so that each woman could have the right to marry if she chose, and men would be free as they were in the very old days. But I fear that the distance between us is so vast that only a few hardy souls will ever venture across it and regular interplanetary communications will be discouraged before they start."

Lella smiled enigmatically. "We shall be nearer the Earth very soon," she said, refusing to add anything more despite his insistence.

They spent the rest of the day pleasantly together, in wandering among the rare groves of the city and sitting among the strange and heavily odorous flowers that were peculiar to Arion. Lella told him of the terrible days surrounding their successful attempt to turn the Death from its path, and the freezing of their fair planet as it was torn away from its orbit and hurled toward the solar system.

"AT first it was like what you had to face on your Earth," Lella said. "The fires of our sun grew so fierce that without our roofs of Colute we should have perished. These roofs had been built, however, in prevision of just such an event, since the astronomers had been aware of the converging paths of our two systems a full century before yours. Colute, as you have seen, is practically indestructible; it will bend and yield like silk if made thin enough, but will never break. Also, of all our substances it is the most impervious to heat and cold.

"Our scientists had not foreseen Arion's leap through space into the system of your sun; but when it came, and our luminary was swept farther and farther from us, and we passed in a few short years from torrid heat to polar cold, the Colute roofs proved equally our salvation against the petrifying ice-age that clutched our planet.

"I can barely remember that time . . . I was hardly more than a child when we swung into the orbit we now occupy . . . save as a nightmare of strange celestial illuminations and seismic disturbances, of terror of mind and storms unlike anything that nature had ever held before. Many of our bravest leaders and our greatest scientists died at their posts, directing the operations through which most of the lives on our planet were saved. But there was nothing like the loss of life that you endured on the Earth. We were better equipped and better prepared; it is Arion's boast that though we women paid a heavy toll to the years of cataclysms, as they were called, not one man lost his life during those parlous times and that the men were as brave in steadfast endurance as the women."

On the following day, Sarrazin was invited to a meeting of the council at which Lella and the three other returned space fliers were also present. The ten great leaders of Arion looked with respect and approval on the tall and virile Terrestrial; their minds explored his own with an eagerness that stimulated all the resources of his vast mental powers. Dirk felt indeed that Earth was being judged by himself and he was pleased to discover that much of his astronomical knowledge was of value to them. Their knowledge of this new corner of their galaxy was only twenty years old, while his mind was able to measure itself with theirs without discredit to the human race he represented.

He was asked many questions about Earthly customs and the evolution of mankind, and his answers were added by a mechanical recorder to the filed information that Lella had already laid before them. Sarrazin received the impression of being accorded the regard of friendly and wise minds whose wisdom had all the stored experience of a vastly ancient civilization behind it. After a while, he asked permission to sit back and listen while Lella and the other space fliers reviewed slowly, for the recording machine, their explorations through the solar system. It was an amazing saga of dauntless space flying that was told quietly there and dealt with as an ordinary execution of duty.

One flier had hovered for many days over Venus; finding it a world of heavy mists and dense, dripping jungles where a remnant of strange beast life seemed to have survived the blazing inferno the planet must have lived through during the passing of the Death. A few small colonies of semi-human animals of a higher evolutionary order seemed to have equally withstood those cataclysmic days and it was clear that life forms understandable to both Arion and Earth would some day develop on that world . . . though that day was far off.

Another flier had sped outward to the limits of the solar system where Pluto spun, a half liquid, half gaseous mass; lonely, airless and condemned to an eternal night. The awfulness of that outpost of the solar world, hung over her brief description of the scene, and impressed itself on the imagination of her listeners.

The third had circled Mars and found there many obvious signs of a powerful but dying civilization, at grips with an almost waterless world, its domains restricted to narrow areas that were beset on all sides by parched deserts.

All spoke casually a language of space, as distinct from the ordinary speech of the planet-bound mortal as the tongue of the mariner from the chatter of the city-born. Sarrazin listened, with bated breath, to what was, in the main, a confirmation of the oldest Earthly theories anent their sister worlds.

At the close of the meeting, the president of the Council turned to Sarrazin with a few courteous words of thanks for his presence on Arion.

"Your presence is a forecast of friendship between two worlds most strangely akin," she told him gravely. "We of Arion's council have great need of such goodly omens in this hour. Lella has told us that you are to be mates. Perhaps the salvation of our planet shall lie in just such unions between our two worlds. A new and greater race may yet evolve therefrom. Such men as you are have been unknown on Arion since a thousand years, and few of our women could resist their wooing, even though in small things, like coloring, you differ from us. We desire that you shall have as much reason to consider yourself at home on Arion as on Earth. Therefore, by the Council's will, the freedom of the planet is yours for life."

Next morning Dirk accompanied Lella to the Council hall, a marvelous building of delicately carved, green crystal, whose each block was clouded within with opalescent tints, that shimmered and changed continually in the synthetic sunshine. This building was the pride of all the planet, and covered a square mile of ground.

AT a side entrance, Lella handed him over to a venerable, gold-haired woman, who was, she said, the chief astronomical expert of Arion. He was led to a seat high in one of the galleries of carved wood—a material that had, since their construction, become more priceless than gold upon Earth—and placed in a seat that commanded the whole of the immense room. Below him rose a great, crescent-shaped section of a deep rose, marble-like stone, that was lifted high above the rest of the council chamber,

and graded in a succession of wide, step-like platforms.

The ten chief councillors of the planet sat on high seats at the central summit, with the lesser councillors, the executive chiefs of the different important departments of the state and the experts and educators of the highest orders, ranged on descending gradations around them.

On the lowest level, but still high above the floor, sat the nobles, as were called all whose services to the planet were considered notable and worthy of a title for life. The old astronomer with Dirk said that inherited rank still existed in Arion and was given a certain amount of social recognition though it was ignored by the state. The councillors, she explained, were chosen by means of a series of intelligence and character tests devised centuries ago by psychologists, and continually perfected since then.

"Every female undergoes a mental development test at each third year of her education," she said. "According to her successive gradings over a long period—for we take into consideration different rates of development in equally capable minds—she is, at seventeen, given the choice of all those professions or trades for which she is mentally adapted. This profession of her choice she then studies for three years, before resuming, if she so desires, the series of what we term, adult examinations. By these the fittest minds mount a slow progression of steps, that lead to the highest posts of the planet.

"Those who pass the five supreme tests are called assistant councillors, and must each be, apart from their general mental fitness, an expert in one, at least, of the vital sciences of Arion. It is from this body that all vacancies in the highest council of ten are filled. They sit, you may notice, next to the council; with, below them, the executives of our chief departments, and farther down the Educators and the Nobles, of which Lella is one of the youngest and most eminent. You can see her from here.

"Now I must leave you to occupy my own place among the executives below . . . you will not be alone of your sex for this gallery is reserved for the men of Luscior, and is, as you may see, the most luxuriously furnished of all the hall."

There were now many thousands of people crowded in the vast space below and in the tiered galleries around the enormous floor. The portals in the walls had been thrown open and over a million spectators, come from all the other cities of the planet, thronged without. Great viso-phones, nearly similar to those of Earth, waited ready to bring to them every inflection of the voices or expression of the faces of the speakers within.

Today, the people of Arion were to learn the final decision of their rulers as to the means they must take to improve their condition and location in space. Not since they had labored to save their planet from fiery dissolution, had so momentous a council sat at Luscior.

Now a bell rang musically and a movement of tense expectation sent a long shiver through the waiting masses. Rising slowly to her feet the chief of the Council of Ten cast her low and grave voice out upon the teeming throng. A silence like death held the crowd.

"People of Arion," she said, "four of the space fliers we sent forth to explore this new solar system, have returned. They bring with them information that removes the necessity of awaiting the home-coming of the four who are still in space, ere we decide what should be done to return our planet to a place where it will once more enjoy the blessings of a life-giving sun. Through our fliers, the bravest and most expert of our race, we have learned four things about this new system in which fate has placed

"One, that the three planets nearest the sun (we except the burnt-out cinder of a world that was scorched out of existence in the past cataclysms) possess an intelligent life; in the case of the planet next that one the sun destroyed, a life near enough to what we may define as intelligent, as to make it unfair for Arion to do anything prejudicial to its continuation.

"Secondly, that the planet that lies farthest from us away from the sun, is a cold, lifeless world; one that will probably never achieve conditions capable of producing life.

"Thirdly, that between the greatest planet of all the system and the third satellite of our new luminary . . . a dying planet almost stripped of water . . . lies a space that should, according to calculations, contain another planet; but where, instead, a great number of tiny, lifeless planetoids flow in an orbit similar to that of a larger world.

"Fourthly, and this is perhaps the most important discovery of all, Lella of Luscior has discovered that on the central one of the three smaller planets near the sun, there exists a form of life almost identical to our own and possessed of an advanced civilization and culture: a form of life preponderatingly masculine, with which it would be undoubtedly advantageous for Arion to form commercial or scientific relations.

"ONE of this race called Human has accompanied Lella here and is the honored guest of our planet. He is a great scientist and will serve us, without doubt, as an interpreter between our two races. It is this factor which makes it seem greatly more desirable to draw our planet both nearer to the sun, and to this friendly world, than to extend our system of artificial heating and lighting of our globe, or to hurl ourselves once more into the void, in search of another sun to warm and hold us.

"It has therefore been decided to move Arion into that orbit now occupied by what Dirk Sarrazin, our visitor from Earth, calls the Asteroids; first destroying this dust of a dead planet . . . or pebbles cast forth from the sun . . . by means of infinitely powerful atomic destroyers, that are even now in process of construction, and using the dead world beyond us as a leverage point from which to propel ourselves through the vast space between us and the orbit we wish to occupy.

"The dead world—the Humans call it Pluto—will naturally be hurled farther and farther away from the sun by the pressure of our beams; but even though it should be loosed definitely from the attraction of its parent star, no loss shall be suffered by any one. Scientists have computed that it will take a year for a fleet of our largest space-ships, equipped with disintegrators of the latest model, to reach the asteroid belt and sweep it clear; and that it would take twelve more of our years to propel Arion into its new orbit.

"Therefore, it is imperative that we should start our preparations immediately and that all should lend their every endeavor to the task; as mighty a one as any world ever undertook! For one week, therefore, the council will wait, so that any opinions or serious objections people may advance concerning the Council's plan may be brought before them. Then, if no contrary decision is taken in the meantime, we shall outfit our space-fleet and send it out to destroy the Asteroids. Meanwhile, the three fliers now among us who have not yet attained the rank of Nobles shall, in token of Arion's gratitude, be elevated thereto immediately.

"Lella, who has rendered the most distinguished service, but who is already a Noble, and is listed among those scheduled to take the examinations that lead to admit-

tance to the assisting council, shall have in token of our gratitude the highest honor and responsibility—since one entails the other always—of all those who must work for the furtherance of the plan.

"She shall command the space-fleet that shall destroy the asteroids, and may bring with her, if she so wishes and he consents, the visitor from Earth, who—she has asked me to announce it here—is going to be her mate for life."

As she finished, a mighty shout, the voice of a whole world, rose to the green roof that towered four hundred feet above the hall. Again and again the air vibrated with the great waves of sound as the council's plans were cheered by the Arionan millions, who saw nothing impossible in a suggestion that left Dirk Sarrazin breathless and stunned by its titanic audacity.

Their civilization had achieved so much that had appeared impossible, that none deemed the impossible to exist any longer in nature. Then, after they had cheered the decision of the Ten, they lifted their voices once again in a great acclamation of Lella, calling till a young messenger, sent hurriedly up to the men's gallery, summoned Sarrazin down to stand beside his future wife before the eyes of the tumultuous crowd. For ever after, Dirk was to remember the mighty roar of the people of Arion as they cheered for him and his bride-to-be.

A week later the work of outfitting the space-ships was in full swing. Sarrazin had accepted with eagerness, the suggestion that he should act as Lella's co-pilot on the *Muta* on the forthcoming trip.

They were married two days before the departure of the two hundred great vessels that composed the space fleet. Their wedding was celebrated with an imposing ceremony, such as befitted an event which Arion considered outstanding at all times, and to which a bridegroom from another planet had added a world-embracing interest.

On the appointed day, the great ships were released one by one, through the bubble-like air-locks above the landing platform of Luscior. Proudly, they lifted through the icy air above the transparent Colute roofs of the vast city, and ranged themselves in an imposing and far flung hollow square. The *Muta*, flag-ship of the fleet, rose up, last of all, amid the frantic acclamations of the people of Luscior, to take its place a thousand feet above the others.

In a vast array, they sped sunward on their course toward the distant orbit of the asteroids. Lella and Sarrazin alternately sat at the controls of the great flag-ship as it led the special hosts through the void, while their crew of tall, silver-eyed women of Arion, watched their strange honeymoon discreetly in the background. In the long watches of the interplanetary day, they discussed and planned their future life, alloting the time they would give to the planet of each.

"Arion needs me and I cannot refuse her my services. There will be much special exploration to do once we have achieved the success of this plan, but neither can you deprive the Earth of your knowledge, or live perpetually on Arion the life of one secondary to myself. We must divide our time fairly between our two worlds. In Arion you must be Lella's husband, though even there your position will be different and higher than that of our Arionan men. On Earth, I shall be only Dirk Sarrazin's wife, and proud of my husband. Perhaps one day, after years of intercourse between Arion and Earth, men and women will come to have an equal importance on both planets. It is possible that we can help to bring that day closer."

At length, after endless cycles of hours illumined by the eternally shining orb towards which they sped, Lella, on Dirk's instructions, signaled a halt. Mars glowed brilliantly ahead of them, and Earth was the size of a major star. They had passed mighty Jupiter, with its many moons, and hovered now on the edge of the Asteroid belt.

Lella and her officers now manned the giant atomic disintegrators—a hundred times the size of any known before on Arion—while Dirk became sole pilot of the *Muta*, and placed her in the center of the close-packed battle line that was to attack the streaming dust of a vanished world and sweep it from its orbital path.

With rays meeting and crossing in an impassable barrier in front of them, the space-fleet sped on till the first planetoid was signaled from the outermost ship. Swinging in a great row across the path of the outermost fringe of the rushing planet dust, they played their dissolving rays into the void ahead. Here, where the flow of Asteroids was thinnest and farthest spaced, they attacked first. Sweeping against their orbital path, they saw, through the transparent hulls of their ships, the hurtling obstacles—not only an occasional, small planetoid, but an unbelievably constant stream of meteors and solids—melt and vanish before their eyes.

Slowly, in a vast swath, they edged toward the thickest part of the stream; their rays making the heavens luminous with strange flarings of colors, so that Dirk wondered what Lo-Wu thought of the weird spectacle his telescopes must reveal to him.

It was life, keyed to an unbelievable pitch of tense sensation, that they lived amid the flarings of those terrible rays. Their crews succeeding each other in shifts, so that the watch against disaster should never slacken, they sped on in a timeless world, against the rushing, unsentient foe. Day after unchanging day, the void poured forth its pebbles, rocks and miniature worlds against the destruction pronounced by distant Arion on their useless matter.

They came, great mile-wide spheres and tiny boulders, streaming through space; faithful to the orbit appointed them when they had first been flung forth from the convulsed sun and hurtling now to their end at the hand of a human foe. Inured though the strange experiences of his life had rendered him, Dirk felt at times his mind reel and almost give at the spectacle ceaselessly deploying itself in front of the *Muta* and her sister ships.

Night and day, they sped in the reversed orbit of the Asteroids, leaving a swath of emptiness behind them. Now and again, one ship or the other would fall behind the defensive wall the others formed, and lagging there would repair a damaged ray or power generator. Twice, a vessel's disintegrator ceased to function without warning, leaving a hole through which the unsentient foe could charge. Once the disabled ship found time to drop to shelter till she had mended her disabled machinery; but the second time she was not so lucky, and was crumpled and annihilated in a breath, under the charge of a planetoid the size of a city, that swept its fused remnants away with it on its triumphal course.

Only the space-trained fliers of Arion could have stood the strain for month on interminable month; and only the shrewd testing received in the cataclysmic years that had trained his youth and tempered his manhood, allowed Sarrazin to equal them in efficient endurance.

At last Lella pronounced their work done. For weeks their rays had played on unrelieved emptiness, challenging space in vain to fling forth more of its giant missiles against their might. Scattering widely, the fleet had searched the vast breadth of the Asteroid orbit for stray remnants of their reign. Finally, half of them had turned aside to

bear the news of a completed task to the Council at Luscior; while the remainder still moved back and forth, athwart the path they had swept already clean. Then they too hurled themselves homeward across space—but the *Muta* did not accompany them.

At Luscior, acclamations and fame and nomination to the assistant councillors' ranks awaited Lella; but Earth called to Sarrazin with a call stronger than that of race or country—a call that only the traveler through interplanetary space can know. Lo-Wu waited, and the world with him for all the new knowledge that Dirk brought as he hurried homeward through the conquered skies.

Once more, they passed above the dying realms of Mars, with its evidences of intelligent life, which they promised themselves they would return to investigate soon. Once more the frozen Lunar world lay beneath their telescopes, as the *Muta* bore Sarrazin home.

Earth brightened and gleamed, beautiful and awash with changeful reflections of light, as she beckoned them to her; till at last the shadow of the Arionan ship drifted across the green Thibetan plains, and lay athwart the giant observatory.

Leaving the ship, they lingered in the peace of the observatory a few days, loath to abandon it for the turmoil that Lo-Wu was preparing for them in the outer world. But they knew it was but a halt between achievements. Looking through the mighty telescopes at Arion's distant luminosity, they knew that they must soon be returning to her, to help in the last of her titanic tasks, the propelling of the planet through space to its awaiting, chosen orbit.

But they knew also that between the two worlds, the first strands of an unbreakable bond had been woven, and that they had been the weavers of them, the sponsors of that future which should weld Arion and Earth so closely. They knew also that to the people of both, either planet should . . . one day in the future . . . be equally called home.

THE END

For the April Wonder Stories

We Present

50th CENTURY REVOLT
by Arthur G. Stangland
Awakening after 2000 years, he found his race under the domination of the creatures from Outside . . . .

THE REIGN OF THE STAR-DEATH
by A. Rowley Hilliard
Spreading everywhere, the star-death threatened the extinction of thousands to save the millions . . . .

THE LAST WOMAN
by Thomas D. Gardner
Alone upon the planet, the Last Woman awaited the coming of the man . . . .

THE ELECTRONIC SIEGE
by John W. Campbell, Jr.
Facing extinction they waited for the two worlds to crash . . . .

THE MAN WHO SHRANK
by George B. Beattie
Into this menagerie of monstrosities, he introduced the puny creature of his undoing . . . .

THE FINAL WAR
(In Two Parts—Part Two)
by Carl W. Spohr
Through the inferno of atomic death, a few men fought madly to keep the race alive . . . .

And

For the May Issue

"BROOD OF HELIOS"

by John Bertin

is the long-awaited story, beginning in the May issue. Although a newcomer to science fiction, Mr. Bertin starts off by a story that we predict will be a smashing hit. Here are all the elements of fascinating science, intriguing mystery, exploration and adventure blended into an astonishing story of the future. Encased in their electronic casing our explorers awaken to find themselves apparently in a strange world. Is it a new planet or a new age, who are the mysterious assailants that face them everywhere, what are these strange growths, so unlike the plants of the earth they knew? What is the terrific cataclysm that must have disrupted time or space or both to plunge a half dozen people into the most amazing of adventures?

"VANISHING GOLD"

by Capt. S. P. Meek

It has been many months since we have published one of Captain Meek's realistic and exciting tales of scientific wonders. With the world in chaos over the gold standard, and half the nations on the verge of financial bankruptcy, the value of the gold in a nation's treasury may determine the prosperity or poverty of its citizens. But suppose that gold were slowly, imperceptibly, but surely to vanish, to evaporate into the thin air? What would happen if no known cause were found? Capt. Meek's scientific detective turns his mind to this question with astonishing results.

"THE VENUS ADVENTURE"

by John Beynon Harris

Mr. Harris, whose "Worlds to Barter" provoked such a storm of controversy, gives us now what he calls "realism in interplanetary travel." This is no ordinary interplanetary story. This is a human and gripping adventure of explorations into a new world with a surprising series of developments, of the rise of one race and the degeneration of another. The effect of the same environment on two groups of people is portrayed in a powerful way, and the menace that must be faced by explorers to a new world were never so clearly pictured.

Mr. Harris shows two of the elements that are fighting for survival today and what the possible outcome of that battle might be in the not too distant future.

"THE MOON MISTRESS"

by Raymond Gallun

follows the great success of his "Revolt of the Star Men" and his "Compulsion Ray." We do not see the moon here from the standpoint of a place for men to explore and fight with brutal nature; but as a habitable world for those who can turn the peculiar conditions on the moon to their own uses. This the "Moon Mistress" can do; and she causes a series of events bizarre, cruel, almost fantastic; but portrayed by Gallun as realities of tomorrow.

Rebels of the Moon

(*Concluded from Page* 363)

Von Rickopf's men went readily enough. They might have rebelled if they were on solid Earth, or even on the Moon. As it was they well knew that, should they overthrow O'Grady's supporters, they would be lost in space. As O'Grady came to Manvel's elbow, the latter spoke.

"The radio is operating perfectly," he said. "I have a connection with St. Louis. Here, someone in the department of astronautics wants to talk to you."

A bald-headed man had appeared in close-up on the television screen.

"Where's Von Rickopf?" he demanded. "What has happened?"

O'Grady told him. As he talked, other faces appeared—more members of the department.

"Very good, so far," said the senior secretary when he finished. "But what do you propose to do now?"

"I'm going to Venus," said O'Grady.

"To Venus?" repeated all the images on the screen at [illegible]

"Where else?" returned O'Grady. "If I come back to Earth and smash this ship to bits we'll have done just what Von Rickopf planned to do—spoil the first interplanetary journey. But we have the course-book and I'm a navigator, or at least enough of one to keep to the route as it has been laid down for me. By the time we reach Venus our load will be lighter. We can land safely. Have I permission?"

The members of the department put their shadowy heads together, conversing in low, hasty tones. Then the senior spoke once more.

"Consider yourself commissioned, then, as commander of the Venusian expedition."

"Yes, sir," said O'Grady, saluting. "Anything else?"

"Only one thing more. *You're a plenty good man!*"

The screen went blank for a moment. But then another image began to materialize on it.

"Somebody calling," said Manvel. He turned dials to clarify it.

Von Rickopf flashed into view!

"You think yourself wise, O'Grady," snarled the German's voice from the screen. "Well, you aren't quite wise enough. We have short-shot rockets that will catch up with you inside of half an hour. Then we'll board you and settle accounts. You haven't forgotten that we have some rocket fuel too, have you?"

For the second time the screen went blank.

O'GRADY looked around for Manvel. The youngster had dropped to his knees behind a chair.

"I was hiding," he explained. "Evidently he doesn't know that I'm with you."

"What difference would it make if he did?"

"Didn't you hear him speak about the fuel at the secret crater? He thinks that you're helpless without a radio-man. But I'm here, and I know his radio tricks. I can save the ship!"

He bent over the dials and worked for some minutes. At length he brought an image into being on the smaller screen. It was the radio gun, mounted on a swivel, of which Von Rickopf had spoken on his first meeting with O'Grady. The latter looked on interestedly.

"I see what you mean," he told Manvel. "Can you operate it with this sending set? Yes, it moves. Aim it at the nearest pile of containers. That's right. Now send a bullet into them."

"Not yet," said Manvel. He was spinning the dials below the larger screen. Suddenly he stepped back from the apparatus, disclosing another image.

It was of the narrow, deep crater where the fuel was hidden, and they seemed to be looking down upon it from the height of a mile or so. Even as they gazed, there were several ripples of movement. Six small short-shot rockets of speedy design slowed down and landed carefully at various points along the lip of the opening.

"There they are," said Manvel softly. "Von Rickopf is making ready to chase us."

A dozen space-suited figures emerged from the ships and grouped around the spot where the ladder extended downward. Still Manvel did not move to discharge the gun reflected on the other screen.

"Why do you wait?" asked O'Grady.

Manvel was looking at the shadowy forms that climbed down into the crater. They were men with whom he had eaten and slept for weeks.

"I'd much rather that you'd—" he began.

"Which control will do the job?" demanded O'Grady.

Manvel pointed silently. Stepping forward O'Grady caught the handle of the switch he indicated and pushed it shut with a quick motion.

The screen was swept by a blinding flash of light that gave way to billowing clouds of smoke. The two men watched, fascinated. The vapors grew thinner, and they could see the gray landscape again, now littered with great masses of riven rock. Of the peak and the crater little remained; of the ships and men, nothing at all.

Manvel reached out mechanically and clicked the power off. Again the screen darkened.

O'Grady put his hand on the boy's shoulder. He could feel the tenseness that possessed the whole young body.

"Go forward," he said. "Get Stitt to help you and get rid of that fuse Von Rickopf put in the storage tank."

Manvel straightened into a position of attention. For the first time since their acquaintance he raised his hand to his forehead, saluting O'Grady as a superior.

"Right, sir," he said briskly, and turning walked out of the compartment.

The detective went back to his controls. He studied the figures in the book and looked at the dials and indicators. So far they had been traveling in a straight line, but now the time had come when they could begin to curve out, away from Earth and Moon, toward the planet Venus.

He began operating his controls carefully. The indicators showed that the big craft responded to his touch properly. At last he leaned back in his chair, his work done for the moment.

Forty days! That was the time the scientists had set for the undertaking—forty days to Venus. He could divide the men into two twelve hour watches of three each, but he himself, the only navigator, could count on only the briefest snatches of sleep and relaxation until the voyage was over. And then what?

Musing, he remembered the thoughts that had been his when, five days ago, he found the crater and learned Von Rickopf's secret. Then he had foreseen an adventure that would overshadow all his other experiences in twenty years of service.

Already he had found the adventure, and as an adventure, it had just begun.

THE END

THE VOICE IN THE VOID

By **Clifford D. Simak**

(Illustration by Paul)

The priest was bathed for a second in a blue lurid flame that lapped over him from head to foot. He wavered in front of me, shriveled and blackened.

THE VOICE IN THE VOID

By the author of "The World of the Red Sun," "Mutiny on Mercury," etc.

"I WOULD give my left eye to have a chance at studying the bones of Kell-Rabin," I said.

Kenneth Smith grunted.

"You would give more than your left eye," he grumbled. "Yes, you would give a damn sight more than your left eye, whether you want to or not."

Ice tinkled in his glass as he drank and then twirled the goblet in his hand.

We were sitting on the terrace of the Terrestrial Club and far in the distance, on the Mount of Athelum, we could see the lights of the Temple of Saldebar, where reposed the famous bones that were worshipped by the entire Martian nation. In the shallow valley at our feet flowed the multicolored lights of Dantan, the great Martian city, second to the largest on the planet and first in importance in interplanetary trade.

Several miles to the north the huge, revolving beacons of the space port, one of the largest in the universe, flashed, cutting great swaths in the murky night, great pencils of light that could be seen hundreds of miles above the face of the planet, a lamp set in the window to guide home the navigators of icy space.

It was a beautiful and breathtaking scene, but I was not properly impressed. There were others on the terrace, talking and smoking, drinking and enjoying the pure beauty of the scene stretched out before them. Try as hard as I might, however, to keep from doing so, my eyes would stray from the lighted city and the lights of the port to the faint glimmer that came like a feeble candle beam from the Temple of Saldebar, set on the top of the highest, and one of the few remaining mountains of the Red Planet.

I was thinking dangerous thoughts. I knew they were dangerous. It is always dangerous for an outlander to become too interested in the sacred things of an alien race.

"Yes," continued my friend slowly, "you would give more than a left eye. If you went monkeying around up there you would probably lose both of your eyes, one at a time in the most painful manner possible. Probably they'd put salt in where your eyes had been. Probably you'd lose your tongue too and they'd probably carve you up considerable and try a little fire and some acid. By the time they got ready to kill you, which they would do artistically, you'd be glad for death."

"I gather," I retorted, "that it would be dangerous to try for a look at Kell-Rabin's skeleton, then."

"Dangerous! Say, it would be plain suicide. You don't know these Martians as I do. You have studied them and pried into their history, but I have been highballing around from space port to space port for a dozen years or more and I have come to know them differently. A fine people to trade with and as courteous and polite as you would want, but they have tabus and Kell-Rabin is their biggest. You know that as well as I. They're a funny people to look at. It takes some time to get acquainted with them, but they aren't a bad lot. Get their dander up, though, and look out! Why, it isn't safe to speak the name of Kell-Rabin. I, for one, wouldn't think of uttering it where a Martian could hear me."

"We'll grant all that," I replied, "but will you stop to consider for an instant what it would mean to me, who have spent my life studying the Martian race, to know what sort of a man or thing this Kell-Rabin may have been. One glimpse of those bones might serve to settle once for all the origin of the present Martian race; it might serve to determine whether or not the race descended along practically the same lines as we of the Earth; it might even open new angles of thought to the entire situation."

"And," grumbled Ken, "have you ever stopped to consider that the bones of Kell-Rabin are to the Martians what a bit of wood from the true cross would be to a Christian or a hair from the beard of the Prophet would mean to a Moslem? Did you ever consider that every man with a drop of Martian blood in his veins would fight to the death to protect the relic against foreign hands?"

"You're too serious about it," I told him, "I know how much chance I'll ever have of seeing them."

"Well," replied my friend, "someday I may knock off for a while and try my hand at rifling the tomb."

CLIFFORD D. SIMAK

"IT is always dangerous for an outlander to become too interested in the sacred things of an alien race," says our author in this intriguing story. And then he goes on to show what would happen when curious men risk life and limb to satisfy that craving to penetrate forbidden mysteries.

It is the curiosity and restlessness of the race that is luring us on to face the dangers of space and other worlds, that will drive us to fathom the innermost secrets of the planets. We will not, we cannot stop from examining every bit of nature, be it near or far. And certainly upon other planets if there be a highly developed race with an ancient civilization, our explorers will be tempting fate if they do not restrain themselves. In this story, restraint is thrust aside, and there results an amazing series of adventures that will thrill and delight you to the last word.

"If you do," I said, "let me know. I'll be anxious to have a look."

He laughed and rose to his feet. I heard his footsteps go ringing across the floor of the terrace.

I sat in my chair and gazed out at the feeble gleam of the Martian temple, set there on its mountain, towering above the weird landscape of the fourth planet. I thought upon the temple and the bones of Kell-Rabin.

In the mighty temple of Saldebar, the revered skeleton has lain for ages, from time that had long since been forgotten. Through all of recorded Martian history, a history many thousands of years older than that of the Earth, the bones had lain there, guarded by the priests and worshipped by an entire planet. In the mass of legend and religion that had become attached to the Most Holy Relic, the true identity of Kell-Rabin had been lost. The only persons who might have any idea of what that mythical thing had been were the priests and perhaps even they did not know.

"Quit thinking about it," I told myself fiercely, but I could not.

Exactly three weeks later I was served with deportation papers because I had attempted, in a perfectly legitimate manner through the civil and ecclesiastical authorities, to obtain permission to study the Temple of Saldebar under the supervision of the Priestly Council.

I had shown, the deportation papers stated, "an unusual and disconcerting curiosity in the Martian religion." The papers also specifically stated that I was not to return to Mars under the pain of death.

It was a terrible blow to me. For years I had worked on Mars. I was recognized as one of the greatest living authorities on modern Martian civilization and in the course of my work, I had gathered a great deal of information concerning the ancient history of the planet.

I had Martian friends in high offices, but I found they were no longer my friends when I attempted to approach them, hoping they might intercede with a word in my favor. All but one absolutely refused to see me and that one openly insulted me, with a dirty smirk on his face as he did it, almost as if he was glad misfortune had fallen my way.

The Earth ambassador shook his head when I talked with him.

"There's nothing I can do for you, Mr. Ashby," he said. "I regret deeply my inability. You know the Martians, however. No one should know them better than you. You have committed a mistake. To them it was the greatest breach of faith possible. There is nothing I can do."

As I stood upon the deck of the liner, whirling rapidly away from the planet I had devoted my life to, I silently, and unconsciously, shook a fist at its receding bulk.

"Someday—sometime—," I muttered, but that was merely to soothe my tortured pride. I never really meant to do anything.

I SAW the familiar, sun-tanned face of Kenneth Smith in the visor of the visaphone.

"Well," he said, "I have them!"

"Have what, Ken?" I asked

"I have," he said slowly, "the bones of Kell-Rabin!"

My heart seemed to rise up in my throat and choke me. My face must have gone the shade of cold ashes and my mouth was suddenly so dust-dry that I could not speak.

A great fear, mingled with an equally great elation, rose in me and seemed to overwhelm me. I stared, open mouth, gasping, into the visor. My hand trembled and I think that my entire body shook like a leaf in a gale.

"You look as if you had seen a ghost," jeered Ken on the other end of the connection.

I gulped and attempted to speak. At last I succeeded. My voice was hardly more than a whisper.

"I have," I said, "I have seen the ghosts of legions of Martians rising from their graves in protest."

"Let them rise," snarled the man in the visor, "we have the damned bones, haven't we. We'll make them squeal plenty to get them back."

There was a hardness, a grimness, a death-head quality in his voice that had never been there before.

"Why what is the matter, Ken?" I asked, "Where have you been?"

"I have been in the Grondas Desert in Mars," he said. "Prospecting. Found a deposit of pitchblende that was simply lousy with radium. It would have made me one of the richest men in the universe."

"Why, that's good news . . . "

"It isn't good news," replied Ken and the hardness was in his voice again. "The Martian government took it from me and I only got out by the skin of my teeth. Some damn clause or other in an old treaty about foreigners not being allowed any radium rights on the planet."

"That's too bad," I comforted.

"Too bad," he grinned like a foul monster of the pit, "It is not too bad. The Martians will pay ten times what that pitchblende deposit was worth to get these blessed bones back. The laugh is on the other horse now. In the meantime come over and have a look. I am staying at the Washington. The box is still shut. I thought you would enjoy opening it."

I snapped off the connection and clutched at the edge of the desk. I was alternately hot and cold. This meant . . . what did it mean? Kenneth Smith had robbed the Martian nation of the thing that was most highly prized on the entire planet. Not only Kenneth Smith, but myself. Not for a moment did I doubt but our short talk on the terrace of the Terrestrial Club three years before had prompted my friend's mad theft. My words had suggested to him the supreme revenge which he had taken on the crooked little men of Mars, our neighbors in space and our friends by treaty.

I felt little remorse. Given the chance I would probably have done the same thing, not merely because of my desire to inspect those famous bones, but for much the same reason as had prompted Ken. My summary dismissal from Mars and the closing of its hospitality to me forever had been a great blow to my pride and the hurt still rankled deeply. The Martians had played rotten tricks on both myself and my friend. I did not think of any possible wrong that we may have done the Martians. In fact, from that angle of it, I felt a satisfaction that became keener every moment This, in a way, was my revenge as much as Ken's.

I felt, however, an inexplicable terror, a dreadful foreboding. The fountain-head of the Martian religion had been profaned and I could imagine what would be the fate of those who had stolen the Holy Remains, if captured by the Martians. That they immediately had discovered the theft and were even now on the trail, I did not doubt. I shivered in sheer physical horror at thinking of the sinister little crooked folks seeking me out.

They would demand that the Terrestrial authorities deliver us to their courts as a last resort, but only as a last resort. The Martians are a proud people and would not readily disclose a tale that would make them the laughing stock of the universe. It was with the priests of Mars themselves that my friend and I would be concerned.

I laughed and jerked open a drawer in the desk. My hand reached in and closed about something that was metallic and cold. I drew it out and slipped it into one

of my pockets. There might be need of a weapon and the little electro-gun that hurled living thunderbolts was the most effective weapon the worlds had developed. Not even the Martians, for all their centuries of a wonderful mechanical civilization, had anything that would compare with it. The gun was an Earth secret and only Earthmen carried it.

I ROSE to my feet and laughed again, the bitter laugh of a conqueror who knows that his victory is empty, that he may, before the next dawn, face a firing squad. It was a great victory, a supreme insult to the Martians. Neither my friend nor I had any cause to love the people of the ruddy planet and both of us had ample for which to hate them. It had been foolish of Ken to steal the bones of Kell-Rabin, but it had been a master stroke . . . if one did not count the consequences.

I let myself out and rode to the ground floor. From there I took an aero-taxi straight to the Washington.

Ken let me in and bolted the door behind me. Then we grasped hands and stood for a long time looking into one another's eyes.

"You shouldn't have done it, Ken," I said.

"Don't worry so much about it," he replied, "I would have done it anyhow. I just remembered what you had said, how anxious you were to see those bones. I would have thought of it, anyhow, for after that radium affair, I sat down and tried hard to think of how I could best humiliate the whole nation that had palmed that sort of deal off on me. Only, if it hadn't been for you, I would have dropped the cursed box out in space somewhere. If they could find it out there, say, half way between Earth and Mars, I wouldn't have begrudged it to them. As it is, I have brought it here. You can study those damned bones to your heart's content."

HE turned to lead the way to an inner room of the suite.

"It was the rottenest thing imaginable," he was telling me, "They let me find that deposit and then took it away from me. Confiscated it . . . threatened me with death if I made a fuss about it. Said they were letting me off easy, because there is a ten-year imprisonment clause in that old treaty to deal with any foreigner who does not immediately report such a discovery to the proper officials. They knew I was working on it all the time and never a word did they say."

He halted and wheeled to face me.

"For two years I worked there in that blazing hell of a desert. I went hungry and thirsty part of the time and went through the sieges of desert fever. I fought heat and red dust, poisonous reptiles and insects, loneliness and near-insanity. I lost three fingers on my left hand when I poisoned them on some sort of a damn desert wood. I found it, tons upon tons of it, I have no idea how many and fairly rotten with radium. One cargo alone would have put me at the top of the world.

"All I would have had to do was snap my fingers and the solar system would bow its knee. I worked, went through two years of Martian desert; I lost my youth, three fingers, and two years of living . . . for what? For what, I ask you? So that some bloated Martian official might glut his hideous belly, so that he might weigh down some simpering female with precious stones, and give great gifts to the priests who guarded the skeleton of a thing that should have been dust long ago!"

His face was livid with rage. The man was insane! This was not the Ken Smith I had last seen only a few years before. It was another man, a man crazed by the horrible heat and the ghastly loneliness of the red reaches of Mars, a man embittered beyond human endurance by the scurvy injustice of an alien people who never had and never could understand the people of the Earth.

He jerked his arm above his head and pointed at the ceiling, and through the ceiling, out into the blind darkness of space where among the swarms of celestial lights a red star glowed.

"When they find out," he shouted, "they'll fear! Damn them, their stinking little souls will shrivel up inside of them. They will know the blasted hope and the terror that I have known. They are a religious people and I have taken their religion! I, the man they ruined, have taken the thing that is most precious to them. Someday, if they don't find out, I'll let them know, let them know that I rattled the musty bones of Kell-Rabin in their holy box and laughed at the sound they made!"

There was no doubt of it. The man was mad, a raving lunatic.

"And if they want them badly, as badly as I think they do," he said in a whisper, "perhaps I'll return them . . . at ten times the worth of my radium mine. I'll bankrupt them. I'll make them grub in their dirty soil for the next hundred years to pay the price I'll ask. And always they will know that a man of the Earth has rattled the bones of Kell-Rabin! That will hurt!"

"Man," I shouted at him, "are you entirely insane? They know now, they must know. Why, the box is gone. Even now they must be searching throughout the whole solar system for it."

"They do not know," replied my friend, "I took steps. I knew I would have no chance, even in my own ship, to make a getaway if they found out at once. There is another box, exactly like the one that holds the bones of Kell-Rabin, in the Temple of Saldebar, but it is an empty box . . . a box that I made and put there. I secreted myself in the temple and took photographs with an electro-camera and with those photos as my guide, I worked for weeks to make another box just like it, except for one thing. On one corner of that other box there is carved a message, a message to the priests of Mars, and when one of them finds that message, they will know that the bones of Kell-Rabin are gone."

A sonorous voice filled the room.

"We have found the message, Kenneth Smith," it said, "and we are here to take the Holy Relic and you."

We whirled about and there, standing just within the room, was a priest of Mars, dressed in all his picturesque habiliments. In his hand he held a vicious little heat weapon.

Looking beyond him, I saw that the lock of the door had been melted away. Funny how a man will notice a little thing like that even in the most exciting moments.

The priest was slow with his gun. I believe that, even with my gun in my pocket, I could have beaten him to it. Priests are not supposed to be compelled to use a gun.

I knew, as I faced him, that quick death from his weapon was preferable to capture, and my hand went to my pocket. It was not more than half way out when a thunderous crash split the air.

Kenneth Smith held his gun in his hand. It was as if it had been there all the time. He was fast with his weapon, too fast for the Martian priest.

The priest was crumpled on the floor, a charred mass of flesh. The odor of burned hair and skin mingled with the sharp tang of ionized air.

There was a scurry in the other room and through the doorway we saw another priest bounding toward the hall. We fired simultaneously and the figure collapsed in mid-air to lie smoking on the floor.

"That's frying them!" I gasped, the words jerked out of my mouth by the suddenness of the events.

"We have to get out of here," snapped Ken. "Quick,

up to the roof. It's only two stories up. I have a small flier there."

CHAPTER II

Fugitives

DROPPPING his gun in his pocket, he raced into the adjoining room. While I stood, stunned and hardly knowing where to go, he re-appeared and under his arm was tucked a box about three feet in length.

He grasped me by the arm and we hurdled the two smoking bodies to gain the corridor. Doors were opening and heads were popping out of the rooms. Below us we heard the hurried tramp of feet and one of the elevator dials showed that a cage was rapidly ascending.

We bounded for the stairs and clattered upward. As we gained the roof an excited horde of people burst from the elevator on the floor below us. One man got in our way as we raced across the roof to the little red plane that belonged to Ken. I bowled him over with a straight left and we hurried on.

We scrambled into the plane and Ken stepped on the starter. The motors whined and the machine stirred. Toward us raced a number of people. Two of them, a few feet in advance of the others, reached the plane and threw themselves upon it in a vain attempt to retard its progress. As we gathered speed they rolled off and the machine zoomed up.

We broke every traffic rule that was ever written as we spun crazily off the landing field at the top of the hotel and hurtled into the upper levels. Irate taxi-pilots shouted at us and more than one man at the controls of passenger planes and freighters must have held their breath as we zigzagged past them at a speed that was prohibited in these crowded levels above the city. Twice traffic planes speeded after us and each time we eluded them. No pilot other than Kenneth Smith, space rover extraordinary, could have sent that little red ship on its mad flight and come out with a whole skin.

In half an hour we had cleared the city and were flying over the country. We knew that the murder of the Martian priests had been discovered and that the description of our plane, and possibly a description of our persons, was being broadcast the length and breadth of the land. Every police ship would be on an outlook for us.

Night, however, was coming on and it was on this fact that we relied for a clean getaway. A half hour before darkness fell, when twilight was creeping over the lower valleys of the earth, we sighted a golden circle on the wing of a ship far behind us, upon which we had turned our 'scope and knew that the police were on our trail. Before the other ship could gain on us appreciably, darkness cloaked us and, flying without lights, we tore madly on.

An hour later the moon slipped above the horizon and by its light we saw that we had reached the Rocky Mountains and were flying over their jagged ranges.

We held a council of war. A wide search was being conducted for us. The killing of the two priests, on the face of it, must have appeared to be one of the most heinous crimes imaginable, one that was of interplanetary importance, and no stone would be left unturned to apprehend us. The red plane was easily recognizable. There was only one thing to do; abandon the ship before we were sighted.

A moment later two figures, one clutching a wood and metal box, plunged down out of the speeding ship, dropped sickeningly for a moment and then gently floated as the valves of the parachutes were turned on. A red plane, throttle wide open, stick lashed back, and with no occupants plunged on its mad course. Two months later I learned that the wreck had been found the next morning some hundred miles from where we had leaped into space.

It was a wild and desolate place where we had chosen to drop out of the plane. Easily we guided ourselves to earth and closed the parachute valves as our feet touched ground. There was the strong, aromatic scent of pine in the air and a strong breeze sighed dismally through the tree-tops. Rocks rolled under my feet as I moved.

We found a dense thicket of a low growing evergreen shrub and hiding ourselves in it, fell into a troubled sleep, waking when the slanting rays of the sun reached between the needles and touched our faces.

Several times that morning, as we tried to decide what to do, I was tempted to pry loose the cover and view the contents of the box which was reputed to contain the bones of the famous Kell-Rabin. I was afraid to do so, however. I feared that, upon being exposed to the air, the precious bones would disintegrate into dust. The box, when it was opened, must be in a laboratory, where proper preservatives and apparatus would be directly at hand. Opening the box, there, in that wild mountainous region, was too much of a gamble. I decided to wait.

Hunger at last drove us forth and we were fortunate enough to bring down a small buck with a reduced charge from Ken's electro-gun. We had no salt, but ate the meat, charred over the fire, like ravenous wolves. We found berries and ate them.

For weeks we staggered through the mountains, lugging our precious box. Neither of us would have thought of discarding it, for to Ken it meant revenge and a fabulous fortune in ransom and to me it meant a chance to probe deeper into the mysteries of the Martian race and a revenge, which I desired only a little less than my half-mad friend. So, although it galled our shoulders and was a dead weight that made our hard way even harder, we clung tenaciously to it.

WE grew beards and I developed a tan that was only a shade lighter than Ken had acquired on the parched deserts of Mars. Pounds of superfluous flesh fell from us and our faces became thinner. I doubt if anyone other than close acquaintances would have known us.

So at last we came to a lonely little town set in the hills and while Ken mounted guard over the box at its outskirts, I entered the town. There I purchased a shabby old-fashioned trunk from the hardware and furniture dealer and appropriate clothes from the one clothing store the place boasted.

That evening, when the east bound plane soared down out of the sky it found two mountaineers, bewhiskered and ragged, who were silent, as all strong men of the open spaces are supposed to be, but who made it known they had struck it "rich" and were going to the cities for a spree. Their only baggage consisted of one trunk of ancient vintage.

In Chicago we purchased a strong box and in it placed the box containing the Martian bones. Half an hour later the strong box was placed in a safety deposit vault in the First Lunar bank and duplicate keys were delivered to Ken and myself. We did not deem it wise to have the box in our possession until the police had dropped their search for us. Reasoning that we would hardly be expected to return so shortly to the city from which we had escaped, we decided to remain there.

The day we placed the box in the vault, we checked out of the hotel. We next visited a certain man who lived in one of the least fashionable parts of the city. We left behind us a sum of money, but walked away entirely different men. We were no longer Kenneth Smith and Robert

Ashby whom the world had known nor were we the bearded mountaineers who had boarded the east bound flier with a single trunk as baggage. Our features were a work of art. There were little plates, which could be removed instantly, but which caused no discomfort, in our nostrils and in our cheeks. Our hair was cut differently and trained to lie just so, under the persuasion of an intricate machine. It was a simple disguise and an effective one. During the next few weeks I met friends of mine face to face on the street and there was not even the faintest gleam of recognition in their eyes.

We established residence in a modest little residential district and bided our time. When the murder of the two Martian priests had blown over, we would act.

And then one day Ken did not return to our lodgings. I waited for him for hours, then started a systematic and careful search. A week brought no results. He had not been arrested, his body had not been found, he was in no hospital, he had not taken any plane.

I was forced to face the apparent facts. The Martians had captured my friend!

A death sentence awaited me the moment I set foot on Martian soil. I had been absolutely forbidden to visit the planet again.

But I did return. I held my breath as I was passed through the customs office. Would my disguise, which had been so effective on Earth, continue to serve me on Mars? The examination, however, was perfunctory, and I was passed. I had declared myself a business man on a pleasure trip, one of the innumerable swarm of tourists who each year shake off the shackles of a prosaic Earth to enjoy the weird offerings of the alien planet.

I stood once more on the soil of the Red Planet. Once more I was face to face with the nation before which Ken Smith and myself had thrown the gauge of battle. My business was a grim one, a mission of rescue, perhaps of revenge. My destination was the Temple of Saldebar.

My friend had told me much of the temple. Hour after hour we had talked of it. Printed indelibly upon my mind was the route which my friend had twice followed when he had filched the bones of Keil-Rabin. Carefully I laid my plans which were, necessarily, a duplication of the same plans which Ken had made and carried out successfully. For the second time in the history of the planet an alien was planning to enter the Holy of Holies by the same route that the first had followed.

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The Mount of Athelum was shrouded in darkness. Two hours before the sun had slipped over the rim of the planet and it would be another hour before Deimos, the larger moon of Mars, would rise.

I shivered in the cold wind that roared up from the desert below and wrapped my black cloak tighter about me. In their holsters at my belt were two electro-guns and in my hand, attached to my wrist by a leather thong was a stick with a weighted end, an ugly and a silent weapon. In my jacket pocket rested a small flash and a package of concentrated food wafers. I did not know for how long I would have to lurk in the great dark temple which reared its massive walls before me, before I found he whom I sought or was at last convinced he was not there.

It was past the usual hour for worship and still I waited. I had no desire to enter the place when it swarmed with pilgrims and worshippers. I preferred to wait until there was no longer any doubt that the temple was occupied only by the priests. It was also necessary that I strike at the hour when guards were changed, for once a clubbed guard was discovered a general search would be started and I would have to go into hiding and hope for the best. That I could get in the building without clubbing one or more of the guards, I knew, was an impossibility.

Like a great glittering jewel set in the black pool of the night, I could see the lights of Dantan in the distance and I chuckled with a fiendish glee when I tried to imagine what an uproar the city would be in if the populace of Mars and of the Earth knew of the theft of the holy bones and the sacrilege of the temple. The matter of the theft had been kept a secret. The Martian government and the priestly clan did not relish publicity on a thing of that sort.

SOMEDAY, perhaps, as the one final act of revenge, I would broadcast the news to the ends of the solar system. I would set every land, from the little mining settlements on Mercury to the last trading outposts in the frozen fastnesses of Pluto on ear with the news. The Martian and his religion would become the laughing stock of the universe. Perhaps, then, too late, the high officials and the priests would wish that they had dealt more leniently with myself and my friend. It was something good to think about as I squatted in the darkness outside the temple, waiting my time to strike. Perhaps I was a bit insane. Probably I still am.

A ringing voice cried out in the darkness and a light flashed briefly in a niche in the temple wall. Another voice answered. There was a ceremonial clash of swords, which the priests carried while on guard as emblems of their post.

Guards were being changed. From far down the temple wall came another challenge and another reply, followed by the clash of steel. It was all ceremony and custom. The setting of the guard, like the carrying of the sword, was a survival from dim, forgotten days.

On this night, however, I thought grimly, there would be need of guards.

Softly I moved forward to gain the denser shadow of the wall and with my left hand touching the rough stones, crept slowly along its edge. Several times I stopped to stare and listen, straining my eyeballs and ears. My presence, I was convinced, was unsuspected, but I was taking no chances. A Martian temple of any sort, and especially the Temple of Saldebar, is a dangerous place for an Earthman.

My clutching fingers, feeling along the wall slightly above and before my head, found a break in the stone and I knew that I had reached the postern gate which I had selected for my entrance to the temple.

Holding my breath for fear that the guard on duty there might hear it, I peered cautiously around the edge of the niche in which the gate was set. Like a graven image, upright, holding the ritualistic position of a Martian temple guard, the fellow stood there directly in front of the gate. The point of the massive sword rested on the stone flagging at his feet and both hands gripped the hilt.

I gathered myself together, gripped the edge of the wall tightly with my fingers to aid in directing my leap, took a firmer grip on the end of the lead-weighted club, and sprang.

The guard never lifted the point of the sword from the ground. I doubt if he recognized me as an Earthman at all. As I loomed in front of him, my club, which had whirled through an arc as I leaped, descended viciously on his skull. I caught his falling body with my left arm and my right hand closed in an iron grip over his mouth to strangle any sound that he might make. Easily I laid him on the flagging and moved to the door. With my hand on the heavy latch I stopped a moment to consider donning the clothes of the dead guard, but decided not to do so. His robes would hinder my movements and my greater size would betray me as quickly as my earthly dress.

The hinges of the door creaked slightly as I let myself in, but the slight sound must have gone unheeded, for nothing happened, although I waited for long minutes, poised to flee upon the slightest indication of any disturbance.

The corridor into which the door lead was pitch black and when I closed the door behind me I was seized for a moment with that indescribable terror that descends upon one when facing danger in darkness. For a split second I wanted to use my flash, but I knew, even as I wanted to do it, that even the faintest glimmer of light might betray me and foil my plans.

From my talks with Ken, who had twice passed this way to rob the temple of its precious relic, I was fairly well acquainted with the route which I was to take to gain the great hall in the center of the temple. I knew that the corridor in which I stood ran straight ahead for a matter of two hundred paces and then veered sharply, almost at a right angle, to the left.

I was to follow the corridor until I gained another, which was more extensively used and which was lighted. There was little danger, I knew, to be expected in the dark corridor. It was after I had gained the second corridor that I would have to exercise the utmost caution. With my hand trailing along the wall of the corridor, I moved forward, tiptoeing so that the sound of my footsteps would be deadened.

I came to the turn in the corridor and saw a faint light in the distance where it entered the second corridor. Cautiously I moved forward, keeping sharp watch on all sides.

CHAPTER III

The Man Without a Body

NEAR to the floor on the left wall my eyes made out a small patch of light and I stopped stock still to study it and try to determine its origin. I was unable to do so until I slithered across from the right wall, which I was hugging, to the left side and then I saw that the patch of light came from a small oblong chink in the right wall. Apparently the wall separated the corridor from another room and a chunk of stone had fallen from it.

Straining my ears, I heard a mumble of voices. Martian voices, apparently coming from the room which the light streamed through the hole in the wall.

Determined to find what was transpiring in the room, I slid forward along the wall.

Only a matter of half a dozen feet from the hole, I was suddenly arrested in my tracks. My foot was lifted to take another step forward and I did not lower it. I was like a pointer who has suddenly ran afoul of a bird. I believe that my ears actually moved forward a little, as I tried to catch again the words which I had heard.

Then, distinctly and as if the speaker were almost at my elbow, came other words, spoken in English and in a voice that I knew . . . the voice of the man I sought, Ken Smith!

"No, damn you. You'll rot in Hell before I tell you. I rattled them in their filthy box. Rattled them and laughed when I heard them rattle. I rattled them, do you understand, blast your filthy souls. They're only bones, musty, rotten bones, like the bones of my body over there will be in a few weeks and like your bones will be when you die . . ."

The voice had risen, shriller and shriller, to suddenly break in a terrible scream of pain that brought cold perspiration out of every pore in my body.

The screaming ended and I heard the rumble of a Martian voice.

"Kenneth Smith, you will tell us where the holy skeleton of Kell-Rabin is. Not until then will we give you a merciful release. Remember, we could leave you here, with the current turned on, high . . . higher than it was just now, and forget about you for years. Perhaps then you would tell us. You are immortal, you will never die. Could you endure an eternity of torture?"

Again I heard the voice of my friend, high and shrill. "I will tell you where the bones are . . . I will tell you."

I could almost see the breathless suspense of those who were on the other side of the wall.

". . . I will tell you where the bones of Kell-Rabin are—when your stinking planet has dissolved into bloody dust and floats among the stars."

The rumble of Martian voices boomed out like the angry beat of a drum. The screaming began again, rising until it seemed that it would burst the ear-drums.

With a leap I was at the hole in the wall and my fingers hooked themselves on the edge of a great block. With all my strength I tore at it and felt it give beneath my hands. Frantically I tugged and it came free. Madly I battered at other blocks, pulling them out, fighting madly to clear a space large enough to admit my body.

All the time the horrible agonized screaming beat upon my brain and urged me to greater effort. The screaming, too, drowned out the sound of crunching masonry and falling blocks of stone.

A last block came free and I leaped through the gap. Even as I leaped, my hands sought the holsters and before my feet hit the floor I had both electro-guns out.

It was a strange tableau that confronted me. On a table to one side of the room lay a naked human body, with the skull split open, the face gone, and the neck horribly mangled. On another table, about which were grouped five Martian priests, stood a small machine, attached by two wires to a transparent cylinder about three feet in height.

It was the cylinder, however, that held my eye and struck terror deep into my soul. It was filled with some sort of milky liquid and in the liquid floated a naked, pulsating human brain. Just below the brain hung a face, the face of Ken Smith! His features were distorted in pain, from the cylinder rose the shrill screams of torture. Below the face trailed a portion of the spinal cord and what were apparently the voice organs.

I went mad with terror and anguish at the scene before me. In two leaps I was at the table where the cylinder sat, had swept away the astonished priest who stood in my way, and flipped up the switch of the tiny mechanism beside the cylinder. Abruptly the transparency of the cylinder faded and the screaming was cut short. As I swung away from the table to face the priests, who were swiftly recovering from their astonishment at my appearance, I saw, out of the corner of my eye, that the cylinder had assumed a solid shape, a dull-grey, metallic shade.

The priests surged forward, but as I jabbed the two guns forward, they fell back, murmuring.

"One word out of you," I hissed scarcely above a whisper, "and I'll fry you where you stand."

They understood. They had no arms and they knew the reputation of the electro-guns. They knew, too, that a Terrestrial, discovered in a Martian temple, would be desperate and that he would not hesitate to kill and kill ruthlessly.

I racked my brain. I was in a quandary. If I killed the priests and made a break, I might be able to win my way out of the temple. I had found my friend, however, and I could not leave him behind. When I went, the cylinder and the little machine that operated it, must go also. I could not leave Ken Smith, or what was left of Ken Smith,

to suffer indescribable torture at the hands of these fiends. If the worst came to pass, I would train one of the guns on the cylinder and deliberately blast what I had seen in its milky contents out of existence. It would be better that way than leaving it there in the hands of the Martians.

MY glance fell on the mutilated body that lay on the second table. It was, I knew, the body of Ken Smith. He had said something about "my body over there." The beastly men of Mars had stolen his brain and placed it in a cylinder! They had said something about him being immortal.

The crooked little men before me had assumed the stoical expression that characterizes the Martian race. All of them were draped in the robes of high office. I smiled grimly and they flinched at my smile. I had thought of what a rare bag of birds I had flushed. Their lives lay in a balance, lay at the end of my two gun-finger tips and they knew it.

"Show me how this mechanism works," I ordered the foremost one in a guarded whisper.

The priest hesitated, but I made a peremptory motion with one of the guns and he stepped quickly forward.

"One wrong move," I warned him grimly, "and everyone of you sizzle. I am here and I am leaving soon, with this cylinder. Maybe I'll let you live, maybe I won't."

The expressions on their faces never changed. They had courage, you have to say that much for them.

"What do you wish to know of the machine?" asked the Martian who had stepped forward.

"I want to talk to the man in the cylinder," I said, "I don't want to torture him, you understand. I want to talk to him."

The priest reached out a hand toward the machine, but I waved him back.

"No," I said, "You tell me what to do. If you direct me falsely . . ."

I did not finish my threat. He beat me to it. He licked his thin lips and nodded his head.

I laid one of my guns on the table, where I could snatch it up at a second's notice, and reached out my hand to the machine.

"You must turn that red indicator back of the green reading," said the Martian. "Back of that the brain in the cylinder has full exercise of its faculties and experiences no ill effects. Above that mark torture begins. The machine is very simple . . ."

"Yes," I said, "it must be. But I am not interested in the machine. I want to talk to my friend. Now what do I do."

"All that is necessary is to close the switch you opened."

My fingers closed over the switch and pushed it home. My back was to the cylinder and I could not see what transpired, but no scream came and I knew that the priest must have informed me correctly.

"You there, Ken?" I asked.

"Right here, Bob," came the well-remembered voice.

"Listen closely, Ken," I said, "We haven't got much time. Something may happen any moment. Have you any suggestions for getting out of here."

"The way out through the corridor is clear?" asked the voice of my friend.

"So far as I know. The guard is dead."

"Then roast the priests and on your way out give me a shot. Promise, though, to finish the priests first. After what they did to me . . . You understand. Eye for eye. Blast their brains, rob them of this eternal life they've given me. And be sure I'm done before you leave."

"No, Ken," I said, "I'm taking you."

"You're crazy, Bob."

"I may be crazy," I retorted, half angrily, "but either both of us go out of here or neither of us go."

"But, Bob . . ."

"We haven't time to argue. You know the ropes better than I do. Any suggestions?"

"Alright, then. Shut me off. Disconnect the cylinder from the machine and stick the machine in your pocket. You will need it . . . or rather, I will. It is run on a connection with any electric current. Disconnect it from the temple wiring. Wipe out the priests and stick me under your arm. That's all. If we get out, we get out. If we don't, crack me up before you wash out."

"That's talking," I cheered him. "What these animals have done to you doesn't make any difference. We're still pals."

"Sure, we're pals. Only you'll have to do all the fighting from now on."

My fingers were on the switch.

"Just a second, Bob. I've thought of something. Think you can carry two of these tanks?"

"How heavy are they?"

"I don't know. Not so heavy, though."

The priests were moving uneasily and I shouted a sharp command at them.

"If you can do it," droned the voice of my friend, "run into that room just across from you. You can see the door. There's racks of tanks in there. Brains of dead priests, you know. Take one of them. He may be a great help."

"Okeh," my hand started to lift the switch.

"Don't forget the priests. Damn them, give them . . ."

The voice snapped short as I pulled the switch free.

A latch clicked behind me and I swung about. In the doorway which opened from the second corridor stood another priest. Amazement was written all over his features. He was opening his mouth to scream a warning when I got him.

THE blast had scarcely left the muzzle of the gun, when I twisted back on my heel and not a moment too soon. All five of the priests were rushing me. The muzzle of the gun was not more than a few inches from the breast of the foremost one when I depressed the trigger. The priest was bathed for a second in a lurid blue flame that lapped over him from head to foot; for an instant he wavered in front of me, shrivelled and blackened and then fell, his charred body breaking into pieces as it fell. The gun crackled and roared and I imagine that the noise could be heard even in the farthest corners of the temple. The electro-gun is not a silent weapon.

Two of the priests died only a few feet from me and the third almost touched my throat with his skinny, twisted hands before I could stick the gun into his stomach and give him everything it had. He simply evaporated in a flash of electrical energy that almost knocked me off my feet.

Staggering from the shock, I caught sight of the last of the priestly quintet rushing for the open door. My finger caught on the regulator and pushed it far over as I fired. It was unintentional, but it was lucky for me that it happened. Set at full charge, the gun hurled a living thunderbolt across the room that snuffed the fleeting priest out of existence and blasted the entire opposite wall of the room into the outer corridor. Other masonry, falling with resounding crashes, completely blocked the passage.

The room reeked with the charnel odor of burned flesh and the sickening stench of burning ozone. My ears were dulled by the thunder of the electro-gun in that vaulted room and my senses were reeling from the effects of the electrical charges set off at close quarters. With deafen-

ing crashes the masonry was still falling in the outer passage. I heard faint cries from some other quarter of the building and knew that the priests of Mars were aroused and racing toward this section of the temple.

Stumbling to the table I wrenched loose the connections from the machine and thrust it in my pocket. I lifted the cylinder and was surprised to find it so light.

Then I remembered. I was to take another cylinder. Had I the time? My friend had a good reason for wanting me to get one of the other cylinders. I was confident of being able to fight my way through.

I resolved to try it. Setting the cylinder back on the table, I ran toward the door which Ken had indicated. Halfway to it I jerked out one of the guns. There was no need of fumbling with a lock now. Every second counted. Training the gun on the lock as I ran, I pressed the trigger. The heavy charge blasted away a section of the door and, running at full tilt, I struck it, driving it open. I sprawled into a room that was so large it at first bewildered me. In huge racks that left only alleyways between them, were piled cylinder on cylinder, identically like the one in which the brain of Ken Smith reposed.

I clutched at the one nearest at hand, hauled it from its resting place and fled back into the other room.

I could hear the enraged babble of the priests as they worked frantically to clear the corridor which my shot had blocked. There was no one in sight.

With a cry of triumph, I swept up the cylinder which contained all that was left of my friend, and raced for the breach I had made between the room and the dark corridor.

Once in it, I ran swiftly until I believed myself to be near the sharp turn. Throwing caution to the winds, I brought out my flash and cut the darkness with a swath of light. Behind me I heard a shrill yell and a flame pistol spat, but the distance was too great and the livid tongue of fire that it flung out fell far short.

With fear riding my shoulders, I tore on. The pistol continued to spit. At the sharp turn in the corridor, I halted and pocketed my flash, hauling forth one of my guns. Quickly I stepped out from behind the projecting wall and as quickly stepped back. In that swift second of action I had swept the corridor behind me clean with an electric charge that incinerated all in its path.

Like a drunken man, I staggered out of the door into the cold night. I almost stumbled over the body of the dead guard, but righted myself and fled on. Behind me rose a babble of fear and anger as the enraged and terrified priests sought, too late, to cut off my escape.

The darkness soon swallowed me and a half hour later I was in a swift plane, which I had securely hidden the day before, headed for the wildernesses deep in the Arantian Desert. In the seat beside me were lashed two cylinders, identical in shape and size, but one held the brain of an Earthman and the other the brain of a Martian.

CHAPTER IV

In the Desert

"IT'S no use, Ken," I said, "We've tried every way. It was just our luck that I had to pick a Martian who died years before the Terrestrials came to Mars. Even at that, he may know as much about it as any of the present day priests. He has coughed up splendidly, especially when I threatened to smash his cylinder with a hammer. These Martians seem to love their eternal life in the cylinders. That made him turn himself inside out. But all that he knows is how a brain is put into the cylinder. He claims that it is impossible to take one out and put it back into a body again."

I sat beside the cylinder in which floated the brain and face of Kenneth Smith.

"Yes, Bob," came the voice of my friend out of the cylinder, the lips in the face moving ever so slightly, "it looks as if I am here for the rest of my life, which our Martian friend assures us is for eternity, once you get inside one of these things. Funny how they can do a thing like that. Some sort of a chemical that keeps the brain alive. I suppose Tarsus-Egbo has told you what it is."

"Yes, he has. Was a bit reluctant about it, but I shoved the indicator up and let him howl for exactly fifteen minutes by the chronometer. When I shut it off, he was ready to tell me everything he knew about the composition of the stuff."

"What do you plan to do now, Bob?"

"That's a hard question, Ken. I'd like to try to take you back to Earth with me again, but that is almost an impossibility, at least for a few years. The Martians are going through every outgoing ship with a fine toothed comb. Probably I could slip out myself—but a man caught with one of these tanks! Boy, it would be just too bad! If we could get back to Earth we could go right on living as usual. Both of us are hunted men on Mars, for the desecration of the temple and on Earth for killing the two Martian priests, but we could manage somehow. I'm sticking by you, though, no matter what happens."

"Stout chap," said Ken, "If I ever get to be too much of a burden, just hit the tank a crack and go about your way."

"You know I'll never do that, Ken. We're pals, aren't we. If the Martians had stuck me instead of you into a tank, you would have acted just as I am acting now. I'd be a poor friend if I quit you now."

Silence reigned as we sat there, looking out over the red wilderness of sand and thorns that stretched for mile on interminable mile all about us.

"If something happens," I assured him, "well something, you know. If a Martian ship would show up or if . . . well, you understand . . . I promise to hit you a clip. I will make sure you won't fall into their hands again."

"That's it," said Ken, "Just say 'So long, fellow, I hate to do this, but it's the best way' and swing the hammer. Be sure to swing it hard enough. This stuff may be tough, hard to break, you know."

The sun was sinking low in the sky and a chill was creeping over the crimson desert. I stirred and slowly rose.

"I guess I'd better get a bite to eat. I'll be back right away."

"Take your time," said Ken, "I enjoy this scene. Leave me turned on. You might shift me a little bit toward the west. I like to watch the sun go down."

"All right, old fellow."

I patted the cylinder and shifted it slightly so that my friend could watch the setting of the sun.

We had been in hiding for weeks. No place on Mars could have been more suitable as a hide-out than this mighty desert, a desert of red sand, peopled only by wicked thorn shrubs and poisonous insects and reptiles.

We had been hopeful at first of obtaining useful information from the brain of the Martian I had stolen from the temple. Particularly I had wanted to find if there was a way of removing Ken's brain from the cylinder and replacing it again in a human body. If there had been, the matter of finding a man willing to give his body and a surgeon to perform the operation would not have been too hard a task. Apparently, however, there was no way of doing it. Once the brain was in a cylinder it was there to stay . . . forever. Solemnly the Martian had assured

me that the milky chemical in which the brain floated contained enough concentrated foodstuffs to nourish the brain and its few attached parts almost indefinitely. When the cylinder was not attached to the machine the brain was in a state of suspended animation and took none of the nourishment.

I had suggested that I could go back to the temple again and attempt to select a cylinder which contained the brain of a priest who had died only a few years before, hoping that, since Tarsus-Egbo had died, there may have been some advancement in the science of the cult and that a way now might be known of performing the operation.

Ken had absolutely forbidden this. He had pointed out the danger. The temple was sure to be under unusually heavy guard as a result of our former adventures under its roof and I would have only one chance in a hundred of getting out if, in fact, I could even get in. He had also pointed out that there was no reason to believe the priests would know any way of replacing a brain in a body. To be placed in the cylinder seemed the highest ambition of the Martian priests. It meant eternal life, the thing most highly prized by them. Why, then, Ken asked, should they attempt to find a way of replacing a brain in a body when life in the cylinder seemed to be the greatly preferred type of existence? Sadly, I felt that I had to agree with him.

I think, too, that Ken did not wish to be parted from me. He felt keenly his helplessness. He depended entirely upon me. He feared that, left alone, he might be recaptured by the Martians. I shuddered to think of what might happen to him if such a thing occurred.

IT was uncanny at first, talking to my friend's brain inside the cylinder, but, realizing that we must accept the situation, we had maintained our friendship on its old standards. Ken joked about his helplessness, while I chose to ignore that he was anything other than the old Kenneth Smith whom I had once known in a human body.

I had eaten and was just lighting up for an after-meal smoke, when my friend hailed me. I hurried to the side of the cylinder.

"What is it, Ken?"

"Take a look over there, Bob. Straight ahead of me, the only way I can look. I've been trying to figure out if I see something or not. I would swear that I could, a white speck of some sort. Just between those two hills where the sun is setting."

I strained my eyes, but could see nothing. I told him so.

"Something funny about that," commented Ken, "I am certain that I see something. Looks like a building of some sort. It may be that my senses have been sharpened by being put into this tank. They're all I've got left to use and they may be developing. I've been watching that thing for a long time and I am convinced it's not my imagination."

"But what would a building be doing out here in the middle of the desert, a good 500 miles from any habitation?"

"I don't know," said Ken. "This is an old planet. There's lots of strange things on it. Get out Tarsus-Egbo and hook him up. He may have developed even better eyesight than I have. If my theory is right, it should be a great deal better. He's been tanked up longer than I have."

I walked to the ship and brought forth the second cylinder.

"I won't have you disconnected for long," I told Ken, "Just long enough to hook up the Martian and see if he can tell me anything."

"Hook us up together, just wire him up to the same terminals I'm hooked up to. I have been thinking about it. I am certain, from what I know of the machine, that two or even more cylinders could be hooked up at the one time."

"You really think so? I don't want something to go wrong."

"I am certain of it. About all I can do, in the shape I'm in, is to think and I believe I have it all figured out. I'd like to talk to Tarsus-Egbo. It would be a marvellous sensation talking to another pickled brain."

"Well . . . . if you are sure . . . . "

"Go ahead, Bob. Nothing will happen."

Securing two short wires, I quickly connected the Martian's cylinder, holding my breath. At the least sign of anything wrong I was prepared to rip the wires away, but nothing did happen. The second cylinder glowed softly and took on its milky transparency.

The Martian blinked his eyes, as if awakening from a deep slumber.

"Kor," I greeted him solemnly in Martian.

He replied as solemnly.

I shifted the cylinder so that the Martian faced my friend.

Rapidly Ken spoke to him and the Martian replied gravely.

"Shift my cylinder so that I may see. My eyes are good. Strange man, your theory is correct. Being placed in the cylinder does sharpen one's senses. I am certain I can see it, if there is anything there."

I shifted the cylinder and Ken, speaking softly, directed Tarsus-Egbo's gaze.

"I also see it," said the Martian, "It is a pyramid, one of the many which existed here on these deserts in my day, but which, before my death had been largely destroyed by my people."

"Why destroyed by your people?" asked Ken.

"For two reasons," replied the Martian. "They are structures that were built by an ancient people who subscribed to a blasphemous religion and who used the pyramids as temples. It was only just that they should be destroyed. Those who destroyed them also found a great reward, for the pyramids invariably conceal great riches. Piety and hope of gain spurred my people on to their destruction. The sight of this one maddens me. I had thought that, by now, all would have been destroyed. It is an insult to Kell-Rabin, an insult to all of Mars that it should stand there. It is the filthy manifestation of a loathsome cult that once held sway over our beautiful land."

I thought that I heard a faint chuckle come from Ken's cylinder, but I was not sure, for he spoke immediately.

"What would you say, Tarsus-Egbo, if my friend destroyed that pyramid over there? Would he be able to do it? Do you think he would find great riches there?"

"It would be a great service to Mars if he did so," said the Martian. "I would thank him and the high priest would thank him. Perhaps we would even accord him the honor of being placed in one of the cylinders when he dies, even as you have been accorded that honor. I would forgive him the wrong that he has done me in his insane quest for knowledge and would thank him if he destroyed the pyramid."

"But," replied Ken, "my friend does not care for your thanks nor for the thanks of the high priest. In fact," I was sure of the chuckle this time, "he would not even care to meet the high priest. I even doubt if he would care to be placed in a cylinder. He is interested only in the great riches which he might find in the pyramid."

"If that is all he wishes," rumbled Tarsus-Egbo, "he will find them there. Riches that will make his brain

swim. Jewels that are like fire and jewels that are like ice and others that are blue as the outer reaches of the sky. There too, he will find . . . . "

"Wait," droned Ken, "Do you realise that you are in the power of my friend. Do you know that he might be very angry if he did not find riches such as you have described in the pyramid? Do you know that he might be so enraged that he would break your cylinder and destroy your immortality? My friend is quick to anger and it is best not to play upon his temper."

"He will find riches, great riches, in the pyramid," insisted the Martian, terror-stricken.

"BUT how do you know that some of your own people have not taken them? Just because the pyramid is there, does not necessarily mean that the riches must also be there."

"They are there," insisted the Martian, "If my people had found the place, it would not be standing now."

"I guess that's about all he can tell us, Bob," said Ken and I unhooked the Martian's cylinder.

"This is a new one to me," I told my friend, "I studied the Martians a great deal before they kicked me out, but this is the first time I ever heard about these incredibly ancient people."

"It was natural that you wouldn't hear about it," Ken pointed out. "It was something closely connected with their religion and you will have to admit that you can't find out much about this religion of Mars. What we have found out has been against their will and we have paid heavily for it."

"This puts a different face on the whole matter," I said.

Ken did not reply for a moment, then he spoke.

"I get you. With riches such as Tarsus-Egbo described, one can get anything one may happen to want. Those riches, Bob, if we can get them, will mean a lot to us. It will mean that we can continue to play our old hand against Mars. It will mean that, after all, we may not have to relinquish our revenge. It may mean that you can, at last, with safety, study the bones of Kell-Rabin. It is worth a try."

"Yes, worth a try," I said, "and we are going to make that try tonight. We can fly over there in a few minutes."

"That's talking now. Wish that I had a couple of hands to help you. Too bad. Two can do more than one. About all I can do is sit to one side and keep up the conversation."

"That's all right, old man," I consoled him, "Now I will have to unhook you. I'll connect the machine to the generator inside the plane and hook you up again so that you won't miss the trip over there."

"Don't go to so much trouble," protested Ken, "I am trouble enough as it . . . . "

"Shut up, you," I rejoined, and pulled the switch, effectively silencing him.

• • •

I had worked for an hour with what few tools I had at hand to open the sealed door of the great pyramid, which towered blackly up into the cold night of the Martian desert. Above me rolled the two moons of the planet and thousands of stars pricked out on the blue-black sky. The night desert wind sang weirdly around the corners of the pyramid. The atomic engine of the plane whined softly, operating the light generator to which I had hooked the machine which motivated the cylinder that contained the brain of Ken Smith.

"I think I am moving a big one now," I told the cylinder, and the voice of my friend came distinctly to me, cheering me on.

The huge stone moved ever so slightly and I threw all my weight against the steel bar which I was using. It moved just a bit more and again I heaved. Bit by bit I worked it out, until I was certain that a few more heaves would pry it away.

"I have it almost out now," I told Ken, "and I am going to move you out of the way a bit. I don't want anything to happen to you."

"It would be hard luck to get cracked up now, just when we are on the verge of a great discovery," he chuckled.

"The Martian may have been lying," I told him.

"He wasn't," protested Ken. "He was telling the truth. That crack about you busting him up if he lied would have made him change his story in a hurry. Funny how those fellows set so much store on long life. If something doesn't happen to me before, I am going to hire somebody to tap me over the head when I get to be about two hundred years old."

Laughingly, I picked up the cylinder and moved it several feet away, then went back to my task. Several more heaves brought the block of stone away and it fell, burying itself deep into the sand. The second stone was less trouble to pry away and after that the third and fourth one came still more easily. At last I had a hole large enough to pass through into the interior of the structure.

With my flashlight trained before me, I clambered through and dropped softly to the floor, which was paved with huge slabs of stones similar to those of which the pyramid was built.

The circle of light which I flashed before me revealed a huge block of stone, apparently an altar, set in the middle of the room. It was not the altar, however, that drew my attention. Piled in a heap before the altar were five great chests. The treasure chests!

My heart leaped up into my throat and I ran forward. Seising one of the chests, I attempted to lift the lid, but found that I was unable to do so. Grasping it under my arm, I staggered to the door, for the chest was heavy, and heaving the chest outside, leaped after it.

With my bar, I attacked the lid and with a rending of metal and the splintering of breaking wood, it came away. Living fire seemed to leap from it to strike me in the face and I threw up my arms across my eyes and stepped back.

CHAPTER V

The Last Defiance

THERE before me lay the treasure of the ancient people of Mars! Treasure that had lain for centuries under the sacred walls of the ghostly pyramid!

Tarsus-Egbo has spoken true! Here was a planet's ransom! Here was wealth undreamed of! Here lay jewels that flashed in the soft light of the two moons and seemed to glow and move and writhe like animate things.

Ken was shrieking at me.

"It's the treasure, Bob! It's the treasure! We are rich men, rich men! Trillionaires! Now we can carry on. Now we can thrust the bones of Kell-Rabin down the throat of the Martian nation! Now we can make them pay, pay, pay . . . pay, damn them, for my radium, and for my body, and for all the hell that they have made us pass through! We have them, we have them . . . right by the bloody throat!"

The sight of the gleaming jewels had awakened the old hatred, the old desire for revenge. They represented power, powers to strike back at Mars. Almost had we forgotten our plans of revenge . . . but always, now I realized, they had lurked in the back of our brains, awaiting release, the release which the jewels had given them. I seemed to see the jewels through a red haze of weird emo-

tion. Ken was right! With them we had Mars by the throat, we could stuff the musty bones of Kell-Rabin down the throats of the high officials and the priests!

Insane? Of course, we were insane. I think we had always been; I, since my deportation from Mars and Ken since the confiscation of his radium deposits.

"Yes, it's the treasure, Ken," I choked. "It is the treasure and there are four other chests just like this one inside the pyramid!"

I ran forward and thrust my hands deep into the box. I brought them away with a handful of stones that glimmered and glinted and flashed blue and red and green and white fire. Some rolled away and lay sparkling and shining in the sands.

"Look, Ken," I screamed. "Look at them. Why, damn it, man, with these we can buy out the entire planet. We can buy Mars and blow it to hell if we want to."

I threw a handful on the sand in front of him and raced back to the pyramid. One after the other I threw out the boxes and with the bar ripped away their lids. They were filled to overflowing with jewels some not much larger than peas, others the size of my fist. Offerings, perhaps, made to some ancient god; offerings made by a people who were wind blown dust millennia ago.

"Are you sure that is all?" asked Ken.

"Isn't that enough?" I asked.

"More than enough," agreed my friend, "but if there are more, we want them."

Once again I crawled back into the pyramid room. Slowly I explored it, from one end to the other and came at last to the rear of the great stone altar. Hardly thinking of what I was doing, I lifted a booted foot and kicked at the altar. I half remembered wondering if it was a solid block or if it was hollow.

As my foot struck the altar, it moved. What appeared to be pivoted stone set in the back of the block, swung aside and out of the aperture toppled a long, narrow box. I leaped aside out of its way and it struck the stone floor with a crash, splitting wide open.

I screamed and fell back, still holding my light directed on the broken box. Out of it rolled something that was round and white and as it rolled I saw that it was a human skull.

Shaking like a leaf, I moved nearer to the broken box and with my foot swept away the splintered wood. My light revealed a human skeleton, the skeleton of a Terrestrial! Still horrified, I stooped down and examined the bones. They were in a poor state of preservation, but easily identified as the bones of an Earthman, not of a Martian. Rising, I walked to where the skull lay, picked it up and examined the teeth. There were thirty-two. Thirty-two teeth, and the most any Martian could boast were twenty-four. The skull was crumbling away even as I held it. It must have been inconceivably old.

I ran from the pyramid. The skeleton of a Terrestrial in an ancient Martian pyramid, which had been closed, which had not been viewed by mortal eyes, for thousands upon thousands of years! What did it mean? What awful secret lay back of it? Terrestrials had landed on Mars in the first space car only a few hundred years before. Yet, I had found an ancient skeleton . . . My mind whirled and my senses reeled at the astounding possibilities which the thing suggested.

Terrestrials, then, had visited Mars before! Other civilizations than our own had risen to great heights, only to fall into nothingness. Could it have been men of Atlantis, or men of Mu, or men of a nation that was forgotten before those other two arose?

Other Earthly races had visited Mars . . . but why had I found the skeleton of one in a pyramid associated with an ancient religion, ancient even to the aged planet of Mars? Could it have been possible . . . could Terrestrials have been regarded as gods? Could the proud races of Mars . . . could the proud religion . . . ?

I stumbled out of the pyramid and tilting my head back, roared in laughter at the two moons which swung above the dead reaches of the desert.

MANY things have happened in the past five years, and as I think of it, I remember that it was just five years ago today that Ken Smith and myself, with the jewels and the cylinder which contained Tarsus-Egbo, the Martian, secretly left Mars on the ship of a space captain who was willing to take a few risks for a double handful of jewels. We reached Earth safely, the captain landing us in a remote section of the Rocky Mountain district.

For a year we remained in hiding and discussed our plans. At last, satisfied that both the Earth and Mars had lost all trace of us, I securely hid the jewels, except for a pocketful, with the two cylinders in a cave and journeyed to the outside.

This time there was no need for a disguise. As I look in the glass now I can scarcely believe that I am only slightly over forty. My hair is snow white and my face is the face of an old man, lined with deep wrinkles and scarred with care.

In Chicago I experienced some trouble in retrieving the box which contained the bones of Kell-Rabin from its place in the safety deposit vault, but the papers I presented were all in good order and there was no reason for raising too great an objection, so it was finally handed over to me.

There was much to do and I set about doing it. I realized that my time might be short, so I wasted none of it. There were draftsmen, electricians, radio experts, laborers, orders for steel and other materials, all to be attended to, and I attended to them. It cost money, but the jewels that we possessed represented a colossal fortune and cost meant nothing if it purchased haste and efficient workmanship.

A month ago, I dismissed the last workman whom I had employed to build the huge broadcasting station ten miles from where I sit and write this. It is the most powerful station in the universe, greater even than those mighty stations on Jupiter. It is the pride of the Earth. I am hailed far and wide all over the planet as one of Earth's greatest benefactors. With that station a message may be flung to the farthest limits of the universe, out to where icy Pluto swings in the outer void and where the sun is no more than a star among many stars.

If only the Earth suspected what would be the first message that is to be hurled out from that station, it would be destroyed immediately by governmental orders. If only Mars suspected, a fleet of warships would leave the surface of that planet within the next few hours, bound for Earth.

The Earth will call me a traitor to the solar system, Mars will list my name on the blackest sheet of the most infamous book, my own people will believe me crazy. I am crazy, crazy with suffering, crazy with a mad desire to humble a cruel and haughty nation. There is a method in my insanity, a terrible, cold, calculating method. And the world does not suspect. The Martians, who have praised my philanthropic work, do not suspect.

Crazy you say, insane, a raving maniac. How, I ask you, have I come to be insane? Would not any man lose his mind if he sat day after day, face to face with the brain of a friend encased in a metal cylinder? Remembering other days, when this thing in the cylinder walked on two legs, laughed and joked, enjoyed a good smoke . . . .

I must hasten, however. There is little time left.

(*Continued on Page* 427)

RED SLAG OF MARS

By **Jack Williamson & Laurence Schwartzman**

(Illustration by Paul)

A pencil of blue hissed at me, for answer. A hot needle of pain seared my shoulder. Nausea and weakness flowed over me.

RED SLAG OF MARS

Based upon the Sixth Prize ($2.50) winning plot of the Interplanetary Plot Contest, submitted by Laurence Schwartzman, 285 Montgomery St., Brooklyn, N. Y.

I AM an old man, in this year of 2080, and I fear to delay longer the revelation of these events that occurred in my youth. Death may overtake me before it is done, and the Martian race be forever thought the malevolent enemies of man, and the greatest man of this century go down in history with the dark name of traitor to that which he loved above all else. My story follows.

Sidney Tancred

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The words burst startlingly upon my ears, from the news-speakers at the street corners. It was a clear, bright morning in the summer of 2035, when the sun shone glad upon the new San Francisco that was rising as miraculously from the ruin of war as it did from the ruin of earthquake. I was hastening along the wide streets of new buildings, to my office in the great tower occupied by Photoscope Communications, when I was stopped by the ringing voice of the announcer.

"Martian flier seen over the Sahara! Half an hour ago a helioplane scout of the Federation fleet sighted a Martian ship above the Sahara Desert, some six hundred miles inland from Cape Blanco. The green, arrow-shaped vessel is said to be identical with those which attacked the earth five years ago.

"The green ship was rising rapidly when first seen, and vanished quickly above the atmosphere.

"It is feared that the incident presages a renewal of the war with Mars. The public is urged, however, not to feel undue alarm. Five years of preparation, by the new Federation of Man, and the building of the powerful Federation fleet, which represents the fighting power of all the earth, have placed us, it is believed, on equal terms with our insidious enemies from across the void."

That message shook the world with a shock of fear. But it did not disorganize our civilization as it might have done five years before, when the ruling motive of our planet was fear instead of confidence. I walked on to the office as if nothing had happened. I was used to the shock of warlike news and the presages of disaster.

Little work, however, did I do that day. That news-flash had awakened my memories of the famous expedition to Mars, with the *Princess of Peace*, of which I had been a not very important member. Memories of our encounter with an alien civilization, and of the astounding war of two planets that had resulted. Early in the afternoon I abandoned all pretense of profitable employment, and hurried home to the comfortable apartment where Joan was waiting — Joan, with whom I had fallen in love on the long voyage out to the red planet.

Late that night came the next news-flash:

"Dr. Nyland Eldred captured in Sahara! Was landed in desert by Martian flier. Thought to have been returned to Earth as a spy, to prepare for a renewed attack.

"The aged scientist was captured by helioplane scouts from the Federation fleet, which have been intensively patrolling all North Africa since the ship from Mars was sighted this morning. Arrested near Arawan, he had with him sufficient food and water to last until he could reach civilization.

"Dr. Eldred has refused to make any statement of the reason for his return. It is hoped, however, that some information can be got from him as to the plans and intentions of the Martians.

"Dr. Eldred, as is known to all the world, was head of the Eldred Areological Expedition, which sailed aboard the *ionodyne* flier, *Princess of Peace*, from Quito, six years ago, for the planet Mars. The expedition, it will be recalled, returned without him, in the following year. The scientist himself had joined the monstrous beings of Mars, and was already beginning a destructive war on the earth when the *Princess of Peace* returned.

LAURENCE SCHWARTZMAN
who furnished the plot

JACK WILLIAMSON
who wrote the story

THE folly of war still pursues the human race, with more and more terrible consequences as new scientific weapons are introduced. Yet, even during these dark days of economic depression, the nations of the world seem unable to get together to take the most elementary steps toward ensuring peace.

But just as people in a nation forget their differences temporarily, when they face a common enemy, so the people of the earth might learn international coöperation if an enemy to the race appeared from out of space. This story, although it deals with that theme, is not a sermon on warfare. It is a thrilling interplanetary adventure; but Mr. Williamson has used a very important problem of today to give a moral to his story.

"Red Slag of Mars," in our opinion, should be read and reread, not only for its sheer entertainment, but for what it tries to teach and tell.

"While the Martian forces were repulsed by the first fleet of the newly organized Federation, a return of the invaders has been continually expected during the past five years. The appearance of Dr. Eldred, it might seem, marks the opening gun of renewal of interplanetary war."

Joan and I, who had been companions of the captured man on that memorable expedition across space, could not share the universal hatred for his name, or the savage delight of the public at his capture. We had both admired him—and more, loved him.

THE distress with which we heard of his capture was increased by the bulletins of the following day:

"Spy of Space carried to Lausanne for trial! Dr. Nyland Eldred, captured yesterday where a Martian flier had landed him in the Sahara, has already been carried to Lausanne, where his trial will take place immediately.

"It is expected that no mercy will be shown this blackest of all traitors, this renegade to his own planet, who led the hideous hordes of another world against humanity.

"It is the curious irony of fate that this arch-criminal should be imprisoned in the Federation Tower, at Lausanne, which he himself built. A jest of Fate, indeed, that his trial will be conducted by the Federation of Man, which he himself planned. Paradoxical that he is to be tried for the crime of making war on the planet which, in his younger days, he made such efforts to free from the curse of war."

The news-flash that came later in the day was even more astonishing:

"Traitor refuses to defend himself! Dr. Eldred stated this afternoon, in his cell in the Federation Tower, that he will make no defense or explanation of his treason.

"Conviction, it is thought, will be swift and certain, if the scientist persists in his refusal. The death penalty is expected. The trial is set to begin day after tomorrow."

Agitation filled me, with the news that my old friend intended to make no attempt to clear himself.

"Can't you do something, dear?" Joan demanded.

"I don't know. We could hire a lawyer for him, if that would help. But if he won't explain—"

"You could see him. Make him talk! I know he can't be what they say—he always seemed so generous and kind!"

"It's a long way to Lausanne."

"But the *ionodyne* flier can get you there in time. You might make it easier for him, anyhow. It must be terrible to have the whole world against you!" Pity was in her tones; her eyes glistened.

"I'll go," I said; and she smiled.

"I couldn't bear for a man like him to die as a traitor!" she said tremulously. "You must save him, Sidney!"

The following afternoon I stepped from the great, silvery hemisphere of the *ionodyne* flier, at Lausanne, head of the Federation of Man. The Federation Tower stood beside me, its argent walls soaring up to the colossal, white-robed statue of Peace that crowns it. Calm Lake Geneva stretched away below, sapphire, supernally brilliant. The Alps were white and majestic in the distance.

Amid this lovely tranquillity, a dreadful deed was about to be done in the name of Peace, a deed that I must prevent!

At length I found the level upon which Dr. Eldred was confined, and a guard took me to Mr. Holly, the warden.

"Your business, sir?"

"I must see Dr. Eldred."

"The traitor?" Holly seemed mildly surprised.

"Yes, the man accused of treason."

"Impossible, I'm afraid. My orders are to keep him strictly secluded."

"But I *must* see him! He's an old friend of mine. And I was with him on Mars. I want to persuade him to defend himself at the trial. I know he can't be guilty of what he's charged with! There must be extenuating circumstances."

"You say you were with him on Mars?"

"Yes. I'm Tancred. Sidney Tancred. Photoscope operator on the *Princess of Peace*."

"Oh, Tancred?" He smiled. "I'm glad to meet you. And I suppose you might see the prisoner, if he is willing."

The cell proved to be a long room, rather narrow, furnished with a couch, a few chairs, and a heavy table. In the end of the room was a broad window, barred with the bright blue pencils of the barrier-ray. The pellucidly blue, sparkling expanse of the lake, was spread below, flecked with the scarlet sails of pleasure craft. The azure sky above it was specked with white wings of freedom, that it must have been maddening to watch through the brilliant ray-bars.

Dr. Eldred rose from the couch at my entrance, and came quickly to meet me with a glad smile on his worn and haggard face.

"Sidney, my boy, I'm glad you've come!"

As I shook his thin hand, the warden withdrew. I heard bolts click, saw the blue net of alarm rays flung across the door. With tears in his eyes, Dr. Eldred waved me to a chair.

Was it possible that this man was about to die a traitor's death? In his clear, calm blue eyes was nothing of the defiant, hunted stare with which most prisoners face the world. Generous nobility was evident in every line of his erect old body, in the firmness of his lined face, in the upright majesty of his grey head.

"I'm mighty glad you came, Sidney," he repeated, simply, as he sat down facing me. "A long time since I've been with human beings very much. A lonely business, to be away from one's kind, alone on an alien planet. But how has life been serving you, my boy?"

"Oh, well enough. The photoscope has turned out a pretty good thing for me. And I've married Joan—Miss Lenwick. You remember—"

"Certainly. A fine girl! Accept my congratulations."

I put the vital question delicately. "Dr. Eldred, you—I understand that you aren't preparing to defend yourself. I want—well what money I have is available. A few able attorneys—"

He stopped me with a wave of his thin hand; his voice choked.

"Mighty good of you, Sidney. But I'm not making any defense."

His quiet statement astonished me. "But you must!" I protested. "You don't realize the public sentiment. You don't understand that you—that you—"

"I do understand, Sidney," he said slowly. "I understand that I am a traitor—the supreme traitor—in the eyes of men. But I can't make any defense."

"Surely you can explain. The Martians must have captured you, forced you—"

"I can't give any public explanation."

"Why?" I pleaded. "Will you tell me why?"

"I might tell *you* the story, Sidney," he said, after a moment's reflection. "It would be an injustice to the Martians if I didn't tell it to someone, before— Anyhow, it can't be published now. But after a few years it might do no harm."

"Injustice to the Martians!" I exclaimed. "Those *things?*"

"We are very much indebted to them, Sidney—mankind is. But you promise to keep my story secret for the time being? Promise not to use it in any attempt to save my life?"

It was a hard promise to make, but he would agree to nothing else.

Then he told me of his part in the Martian War. But I must preface what he said with an account of our expedition to Mars, and of the incidents that led to that strange conflict.

CHAPTER II

Red Slag

IT was Dr. Eldred's own discovery, in 1998, that made space travel possible. In that year he patented the *ionodyne* screen or gravity-deflector, which is a film of ions that reflects the radiation we know as gravitation, making its force one of repulsion instead of attraction.

His first trial ship, which rose upon her maiden flight on the following year, had much the same aspect as the modern *ionodyne* flier. It was composed of a flat, circular *ionodyne* screen, with a dome-shaped superstructure covering pilot and generators.

In the first year of the new century, Dr. Eldred abandoned his experimental science to begin the great undertaking that occupied the rest of his life, and the first interplanetary flights were left for other men to make.

Only five years later Tamberlyn was able to fly around the moon. He made a successful landing on the following year, having designed crude space suits and made certain improvements in his ship. He was hardly more than back from the moon before he began preparing for the voyage to Mars.

Three vessels, including that of the intrepid Tamberlyn, had visited the red planet when our expedition was organized at Quito, Ecuador, in 2029. Tamberlyn, having landed on a plain of barren red lava in the northern hemisphere, near the edge of that dark, arid sea-floor that the areographers term *Syrtis Major*, found no living thing. He reported the atmosphere unbreathable, almost totally lacking both water and free oxygen.

Priestly was next, three years later. His famous *Atom IV* was badly damaged in an unfortunate landing near the marking known as *Thoth*, upon the same curious red lava that Tamberlyn had observed. Since the entire efforts of the party were directed toward the repair of the flier, little scientific work was accomplished. Samples of red lava, however, were brought back, to mystify terrestrial chemists.

The Smith-Montgomery party spent nearly two months on Mars in 2027, completing a rough survey of the surface. They returned with news of astounding discoveries.

They found that nearly all Mars was covered with the strange lava which is commonly known as "red slag." That curious rock containing no oxygen, was a puzzling fact, since oxygen makes up nearly half the rock on the earth's surface.

They found remains of life. Of intelligent, civilized life.

Hulls of queer ships, lying upon dry ocean floors. Wrecks of enigmatic machines. Ruins of colossal metal buildings. Fragments of metal, bearing strange inscriptions, which proved that the lost race had possessed a written language.

"It is significant," Smith-Montgomery remarked in his published monograph, "that only metal objects remain to tell the story of the Martians. All else has been burned to red slag. We are convinced that some unknown cataclysm devastated the planet, obliterating the civilized race, leaving only objects of metal unharmed.

"This catastrophe occurred perhaps hundreds of thousands of years ago. The atmosphere (being—like the red slag—curiously devoid of oxygen, free or in the form of water) has little or no corroding action upon metal."

This account created a sensation, and another and larger expedition was immediately planned, to investigate fully the relics of the lost race, and to discover, if possible, the nature of the catastrophe that had blotted it out.

I was fortunate enough to be a member of the expedition that drove out into space from Quito, two years later, aboard the gleaming new *Princess of Peace*.

Our leader was Dr. Eldred himself—it was his first interplanetary voyage, in the ship of his invention. His kindly good humor soon endeared him to all the crew. Then fifty-nine years of age, he was lean, erect, and strong, his blue eyes bright with energy, his abundant hair still dark save at the temples. But his face was already seamed with the bitter lines of failure.

His invention of the *ionodyne*, thirty-one years before, had established him as one of the greatest American scientists. In the African War, two years later, he refused the use of his patents to both belligerents, declaring that the new instrumentality would make war too horrible. Despite his efforts, the patents were infringed, and millions were slain by bombs dropped by fliers hanging safe above the atmosphere.

Immediately he forswore his allegiance to the land of his birth, and terming himself a "citizen of the Earth" he set about organizing the Federation of Man. The new organization was to be an international government, that would enforce peace among nations.

Peace within nations, he pointed out, had been won only by disposing of the private armies of individual nobles, and peace among nations could be permanent only when national armies were abolished.

He devoted to the project the vast fortune that his patents had earned, erecting with his own funds the great Federation Tower, beside Lake Geneva, as a gift to man. But his efforts were rewarded with failure. No nation would disband its army to join his proposed Federation of Man, entrusting its defense to an international commission.

His fortune exhausted, his great dream a failure, he had accepted the leadership of the expedition to Mars.

THE fifty members of the party included the flier's crew of twenty men, and a score of Earth's ablest scientists, men and women. The scientists included, to name a few of them, John Nisbit, Canadian astronomer; Anido Castelar, Chilean archaeologist, Sonia Milikov, Russian radiologist; Vaisle Barak, Rumanian geologist; Emil Heink, German chemist and mathematician; Iko Satsuma, Japanese philologist; and Paul Rhodes, South African areographer.

I well remember the moment that I stepped from the helioplane that brought us to the ship. The vast, shining dome-shaped *ionodyne* flier lay in its cradle high on the Puengasi Ridge. The Andes rose about us stupendous. Quito lay in the hollow beneath and westward, her low adobe buildings a pattern of yellow squares in the bottom of a colossal cup.

We went aboard, most of us panting a little from the combined effects of excitement and the rare atmosphere. I stood staring through the small, thick-glazed ports, while the valves were being sealed and the final preparations made.

The sun sank; the blue sky above the soaring peaks was darkened to purple; the peaks themselves, a pale and mystic white, were touched with sullen crimson.

Then we passengers were called to take the injections

that were to prepare our bodies for the physiological effects of weightlessness, and of exposure to the cosmic rays. When I recovered from the unconsciousness caused by the drugs, we were far out in space.

I left my cabin and returned to the ports. The sky was strangely black; the stars hung motionless in it, unwinking, amazingly brilliant. The earth was a globe of wonder behind us, luminous and greenish. The harshly bright crescent of the moon swung slowly into view from behind it, against ebon, star-hung space.

In those early days, space travel was interesting, but by no means wholly pleasant. Most of us suffered, despite the injections we had been given, from the so-called "space fever" due to the action of the all-pervading cosmic rays upon our brains. A week out from earth, a generator burned out, and for three days, while it was being repaired, we suffered the nausea and inconvenience of complete lack of weight. Small meteoric particles bombarded the vessel's steel hull continually; half the crew was kept busy searching for and repairing leaks.

Thirty days out, and Mars hung against the black sky outside the ports, like a great red ball, with a little white oval at its top, and a dark, irregular, greenish-blue belt around its equator.

A day later, and we landed upon the red plateau. It stretched away in all directions, as far as we could see from the ports. A flat plain, covered with the glistening, lava-like rock, that we called "red slag."

A mile northward rose a forest of naked beams of blue-white metal, ugly, skeletal, unpleasantly suggestive of the bleached bones of some weird and colossal monster. A wondrous city of the lost race must have stood there one time; now only its gleaming skeleton was left, half covered with red slag.

There could be on Mars, of course, no counterpart of the Rosetta Stone that unlocked the secrets of ancient Egypt for the archaeologist, Champollion. Among the records of the lost inhabitants of an alien planet, we could hope for no parallel inscriptions in a familiar language.

Impossible, many scientists had pronounced the reading of the Martian inscriptions. The language of Mars, they insisted, could have nothing in common with any human tongue. The thought, even, of two races that had developed through different routes of evolution, from different origins, would be cast in different molds.

But most of us aboard the *Princess of Peace* were hopeful, confident that reason, intelligence, could bridge the vast gulf between ourselves and the minds of the ancient people of Mars. Hopeful, even in the face of difficulties that long remained insuperable.

For three months we moved the great silver dome of the ship from point to point over the endless, desolate fields of red slag that encrusted the planet. From each landing place we sent out a dozen small parties, of two or three members each, with cameras and scientific instruments, to search the adjacent surface for relics of the lost Martians. Almost always I accompanied Dr. Eldred—my part was merely to carry his instruments. Usually Joan Lenwick was with us—she was an American artist and journalist who had contrived to get a place on the expedition as Dr. Eldred's secretary. I found her a gay and vivacious companion.

THE first explorers had employed heavy, air-sealed space suits. But we were able to dispense with them, wearing in their stead light breathing masks, which supplied sufficient oxygen to maintain life in the vitiated air, without the inconvenience of the clumsy suits.

We visited and photographed the ruins of a score of cities, most of which we discovered by scanning the surface of the planet through telescopes when the ship hung high above. Upon the bare skeletons of metal that rose weirdly above the ubiquitous red slag we found many markings that were evidently inscriptions, but nothing that served as a clue to the reading of them. For my part, I was beginning to believe that knowledge of the Martian language had died with the Martians, forever.

Three months we had been on Mars, on the day when Dr. Eldred and Joan Lenwick and I crossed a low red range of glassy lava hills, and came out upon a long, level plain covered with glistening, vitreous slag, completely rimmed with the rolling, crimson hills.

The monuments stood on the open red plain. Twelve thick, squat pillars of some white aluminum alloy, set in a wide circle. Somehow they seemed almost of mystic significance. Twelve octagonal steles of argent metal, every face covered with strange characters, in fine, regular lines, or with odd-looking pictures and diagrams.

Dr. Eldred rushed up to them in the nearest approach to excitement I had ever seen him display.

"The last records!" he cried. "The last! See, they were set up after the cataclysm!"

He snatched out a pocket lens, scrutinized the minute characters cut in the white metal of the nearest monostyle.

I gasped stupidly, and stood gazing.

A weird enough scene, it was, indeed. The flat, hill-rimmed plain of red lava, glittering in the sunlight as if red frost covered it. The huge white columns standing in a circle, like some mystical Stonehenge of the lost race. The tall, thin-bodied scientist, grotesque in his oxygen mask, running excitedly from pillar to enigmatic pillar.

"The last records?" I asked, uncomprehending.

"Don't you see?" Joan cried, uncontrolled excitement in her own voice. She pointed with a slender hand at the base of the nearest pillar.

"See what?" I still did not understand—to tell the truth, I had more eyes for her trim, athletic figure than for all the wonders of a strange planet; even the fantastic breathing mask could not hide her beauty.

"Stupid, the columns are *on* the red slag!"

"On it? What does— Oh, I see!"

And she laughed at me.

I went back to tell the others of our discovery. We brought the ship over the low hills, landed it half a mile from the monuments.

I had no immediate part, of course, in the decipherment of the inscriptions. My part was to assemble the *photoscope*, and establish communication with the earth, with which Mars was just passing opposition.

It was the first time that transmission had been attempted over any such distance as forty million miles; the apparatus was mostly of my own design, and rather in the experimental state. The set was so complex there had been no room to assemble it on the crowded ship; I installed it under a flimsy shed of sheet metal, on the red slag beside the vast, looming, silvered dome of the *Princess of Peace*.

In the principle of the hook-up was nothing new. A great xenon tube, mounted in a reflector that would concentrate its modulated rays into a beam narrow enough to reach the earth. A powerful electronic telescope, to collect the light from the sending station upon a photon tube, that would pick it up for electrical amplification. But there was novelty in the attempt to talk over forty million miles and more of frozen, night-black space.

It took over a week to finish the assembly. Dr. Eldred and several other members of the party were waiting in the shed when I made the last connection, closed the circuits, focused the sending beam and the telescopic

receiver upon the tiny, far-off planet, and began speaking into the microphone.

"Mars calling . . . Mars calling . . . Mars calling . . ."

Minutes went by, as I spoke into the transmitter. All of us watched the speaker, strained our ears.

At last came the reply, faint, sputtering a little, "Hello, Mars. Capetown Observatory speaking . . . Hello, Mars."

It was hard to realize that the tiny, ghostly voice we heard had come nearly half a hundred million miles. Hard to realize that it had taken four minutes to leap the gulf to us, at the speed of light.

My voice was unsteady with excitement as I replied.

"Hello, Capetown. Can you give us short-wave teleview contact with the offices of the Eldred Areological Expedition, Federation Tower, Lausanne—"

My own voice was whispering back from the speaker, "echoed" from the earth, where the speaker in the observatory must have been near the microphone.

"Mars calling . . . Mars calling . . . Mars calling . . ."

My own words of eight minutes before, weirdly whispered back by the ether.

Then finally the other tiny voice in the observatory, exclaimed "Hello."

The tiny white screen came suddenly to life; we saw in it the agitated face of Vandivier, our representative back on Earth. His lips moved; his voice murmured faintly from the speaker.

"Hello. Very glad to connect you. Was afraid something had happened. Can't see anything in the screen yet. Suppose it will be eight minutes before your images come on. Dr. Eldred? I suppose you are there? Tell us how you're doing. The world is gasping for word!"

The lean old scientist stepped before our own teleview lens—with, I thought, the least trace of boyish self-consciousness.

"Hello, Vandivier. Sorry we didn't have time to let Sidney make contact before. We're all in good health, I think. And all of us will be glad to have any personal messages you have to send on to us.

"As for the work, we've been doing well enough. In fact, we have enjoyed better fortune than we had a right to expect."

CHAPTER III

Earth in Flames

AND he began a brief account of events that I had been too busy, during the last week, to follow.

"We have discovered a set of monumental records that were erected by the Martians *after* the unknown civilization had wiped out their civilization. Some of them survived the catastrophe, whatever it might have been—survived it long enough, at least, to set up these monuments.

"We have every hope of deciphering these inscriptions, despite the manifest difficulties to be overcome. Our efforts would almost certainly prove futile, but for the fact that the Martians provided a key.

"These monuments, we believe, were set up as a warning to prevent the destruction of any future civilization of Mars by the same doom that overtook the old. And fortunately for us, an ingenious key was provided, so that all future inhabitants of the planet might be able to read the warning.

"Though we have made no more than a bare beginning in the translation of the actual records, we have reached the point where there is no doubt of ultimate success. Perhaps I should give some description of the key, which enables us to approach the inscriptions through the universal languages of mathematics and reason.

"The Martian numerals were presented first—they used, by the way, the duodecimal system. At the top of the first column, the numerals were engraved, each accompanied by a corresponding number of dots. Below, simple problems in mathematics were illustrated, with the numerals and parallel groups of dots, to indicate the arrangement and use of the figures.

"Following, the Martian alphabet was illustrated; the system is fairly complicated, comprising 217 characters.

"The first face of this monument, below the part devoted to the alphabet, is pitted with little cells, filled with some hard, transparent crystal. Some object—a specimen of metal or mineral, a miniature replica of some machine or utensil, an image of some form of the animal or vegetable life that existed upon Mars before its 'burning out'—is embedded in the transparent crystal in each cell. Below each object is engraved its name. Thus we have been supplied with the meaning of a large number of concrete nouns.

"Following, and taking up another whole face of the monument, is a great number of remarkable pictures, to illustrate the meaning of other nouns, and of verbs of action.

"A set of diagrams is next, which, with the numerals, nouns, and verbs illustrated above, give an approach to the science of the lost race. Thus gradually the key leads us, from the simplest beginnings, to a full knowledge of the Martian language."

Dr. Eldred stopped, the little room was silent for a time, then the ghostly voice whispered again from the speaker:

"Hello, Mars. Your message coming in. Earth sends you all good wishes."

But that narrow light-beam was to bring from Earth, all too soon, dreadful news.

Five weeks went by. I was busy at the photoscope during all the hours when the earth was high enough above the horizon to make communication possible—photoscope apparatus had been installed in a score of terrestrial observatories, so that always, during the Martian day, I was able to make contact through one or another of them.

I handled personal messages from all over the earth to members of our party. Replies to them. Scientific reports and bulletins to the news stations. World news in general. Ordinarily I used teletypewriter instead of teleview connections, since less power was required and atmospheric interference was diminished.

Several members of the party insisted upon sending messages in code, and I transmitted them without question—little dreaming the hellish thing that was abrew.

I recall one occasion when Joan Lenwick admitted that she was homesick for her native New York. I invited her into the station, and disregarding the waiting official communications, I spent two hours in getting a hook-up with a New York teleview bureau, and allowing Joan to view the life of her native city on the screen. The first time, I suppose, that the famous glass-roofed metropolis has been toured vicariously, from a distance of fifty million miles.*

Joan was delighted. And Dr. Eldred, if he ever learned of the delay in transmitting the dispatches, was kind enough to say nothing.

The translation of the monuments proceeded rapidly. Dr. Eldred told me one day that a great war had been in progress, between two factions on Mars, when the cataclysm had blotted out the planet's life.

"Despite their high civilization," he said, "the Martians

*Since the Earth-Mars opposition the planets were moving steadily apart, the Earth outstripping Mars in their race about the sun.

had never overcome the great scourge of war. It seems that they used their science largely to oppress and destroy one another—as we have done on earth. In the last days, they were in the midst of their greatest war—all Mars aflame with it. And the disaster, whatever it was, swept them all away—all save the handful that erected the monuments."

He added bitterly, "They might have been able to save themselves, if they had been civilized enough to have outlawed war."

I thought of the vain years he had devoted to planning the Federation of Man, that was to end war on earth, of the failure he had reaped.

JUST two days later came the despatch:

"Fighting on the Eurasian frontier," I read upon the paper strip from the clattering teletypewriter. "Hostilities began in the Volga region this morning, and serious conflict was in progress, by noon, all along the line to the White Sea.

"Kazan was bombed, an hour ago, from a yellow *ionodyne* flier. The loss of life, yet unknown, it is estimated at tens of thousands. The ancient Kremlin, or citadel, with its many beautiful churches and monasteries, is thought to have been completely obliterated.

"According to reputable authority, the first shots were fired when a vodka-drunken Russian soldier hurled a cabbage across the border, and the men on the other side returned the missile with jeers.

"It is yet hoped that hostilities can be stopped by the action of existing peace machinery. But any measures must be prompt, since the forces along the Eurasian frontier number nearly five million men."

Communication was soon cut off, by the setting of the earth. Our little camp on Mars was anxious until it had risen again. The whole party gathered about the little station that morning, when the first messages were coming through.

We heard the worst. War had run over all the earth like a flame. Half a million were already dead—most of them noncombatants, hardly aware that war was begun. Fleets of *ionodyne* fliers had bombed many cities—Moscow, London, Istanbul, Cairo, Yokohama. Nearly every nation on earth had already declared for one side or the other, driven by hatred or fear.

Dr. Eldred slumped down on a stool in my shed when he heard the news. Life seemed suddenly gone from the man. His shoulders sagged; his head hung dejectedly. His gray face was lined as with suddenly added years.

"It's the end," he whispered to me, in a dry, hopeless voice. "I did my best. But this is the end! War. Red war. Science debased to slay our fellow men. Our civilization can never weather another war—if you can call it a civilization that lets wars happen."

He ran his long fingers despairingly through his hair. "Sidney, when we get back, earth may be burned out, as Mars is! Red slag . . ." he whispered, "red slag . . . red slag, where men and women and children used to toil and laugh and love."

But most of the party took the news of war far differently. They hung in an excited mob about the station, clamoring for the latest news, wildly discussing each fragment. Everyone was eager to know which side his nation had joined, each eager to champion his country and to proclaim another in the wrong.

On the previous day the members of the expedition had seemed a sober, sane group of scientists, working at a serious problem, in whole-hearted coöperation. But the madness of war seemed planted in the blood of all. Before the day was gone, we were divided into two factions, each eyeing the other with feverish suspicion.

Twice that day the words of heated argument gave place to blows, and once-sober scientists rolled on the red slag of Mars, fighting with the same elemental weapons their ancestors had used in jungle war.

I was too busy with the photoscope apparatus to take any active part, physical or otherwise, in the discussion, though I confess that my sympathies were with the side my own nation had chosen to espouse—but few, in those days, shared Dr. Eldred's sense of world-patriotism.

On that day several members of the expedition received messages in code, and replied to them in kind—without rousing my suspicion.

That night, after the earth had set and the messages had ceased, Dr. Eldred called us together in the main salon of the *Princess of Peace*. Lean, aged man, shoulders drooping as if the last day had added ten years to their burden, he walked out before us, and spoke.

"Men and women, we heard today that war has spread like devouring flame over our native planet. It is a terrible thing. Our world may be burned out when we return. A waste of red slag, like Mars. Any one of you may have friends on earth dying hideously at this instant.

"Many of us are already infected with the dread fever of war. We unreasonably hate the people of those nations that happen to be at war with ours. We are filled with hot madness, that bids us kill and maim and destroy.

"But we must subdue that fevered madness. We have work to do here, that requires all our efforts. It is perhaps the greatest task that our science has ever attempted, and great good may come of it, for the earth. We must let no spirit of dissension weaken our efforts, or we shall not only fail in that task, we shall all die here, miserably!"

Half a dozen men sprang to their feet, as he finished. Anido Castelar, the tall Chilean, was the first to speak, in his halting English.

"You mean we do not go back at once? Just today I have a call from my nation. My people, they need me. We must return."

"We can't leave Mars until our work here is done," Dr. Eldred said.

Confusion rose. A veritable clamor of demands that we start back at once. Dr. Eldred held up a thin white hand until the uproar had ceased.

"We must think no longer of our individual nations, but of our planet as a whole," he said quietly. "We must learn to live together on our globe, or die on it.

"Earth could gain nothing by our return. Our knowledge of science would only make the war more horrible. A single invention of mine, conceived without malice to any, has already cost the life of millions.

"Here we may accomplish something useful."

"Let's vote!" someone shouted. The cry was clamorously echoed.

AGAIN he silenced the room with his hand. "Our ship is too small a place for contention. We all depend upon each other. If half of us were dead, the other half would die, because they could not operate the ship.

"And the earth has become too small for war. Nations are too close together; they depend too much upon one another. They must learn to live without war—or die."

He dismissed the meeting. For the time being, he had won. But it is hard for one man to cope with the war spirit in many. It is too strong, too elemental. Hate and fear can fan it into madness that no reason can curb. I knew trouble was to come.

The history of war, through the next month, need not

be detailed here. The story is old as man. Men fought bravely, on land and under the sea and above the air—bravely, but futilely, vainly. Cities destroyed, fair lands ravaged, men killing men in panic insanity.

This was the old red tragedy, played on a greater stage. The dead were hundreds of millions. The ravaged lands were continents. The destroyed cities were New York and Seattle and Quebec; Vienna and Madrid and Nizhni Novgorod; Buenos Aires and Perth and Tashkend—those and many more.

Never had the power of science enabled men to destroy their fellows upon a scale so lavish; they proceeded with a fine abandon of enthusiasm, as if to finish the task out of hand.

It was difficult, during that month, for Dr. Eldred to maintain any discipline in the party. All insisted upon waiting about the photoscope for news, until he ordered me not to handle any private messages. And that made more trouble.

But the translation of the inscriptions proceeded rapidly.

One evening when I was in his office, aboard the *Princess of Peace*, Dr. Eldred summed up the results of the work, in a report that he dictated to Joan Lenwick, for me to transmit to earth.

"The cataclysm that transformed this planet into a red waste of burned lava," he began, "took place nearly 100,000 years ago. At that time Mars was a habitable world. Oceans covered nearly a third of its surface; its continents supported luxuriant vegetation; its atmosphere contained sufficient humidity and oxygen for the highest life.

"The intelligent beings—quite unlike men in form—whose ruined buildings are found throughout the planet, possessed a mechanical civilization, higher, it may be, than ours of earth. But, like us, they had failed to stop war among themselves.

"At the last, the planet was divided between two great nations or leagues, each holding half the planet. Intermittent warfare had long flamed between them."

The old scientist strode wearily back and forth across the room, sometimes running his thin fingers through his hair, with a quick impatient motion. His hair was fine and abundant; he wore it long, and it was always tousled from that habit of running his fingers through it.

Joan sat at her desk at the side of the room, cool and trim and straight. Her white fingers moved over the keys of her machine with an easy, confident skill. She wore green, I remember; and she looked very lovely, cool and calm and capable. She did not have to watch the keys; sometimes she looked across at me, with a hint of smile in her blue eyes.

"Finally, with new weapons that its scientists had developed," Dr. Eldred went on, as he paced the floor, "one faction set out to crush the other. For a long time it prosecuted the war successfully, destroying the most of its enemies, and surrounding the others in a vast, fortified city, near the south pole of Mars.

"But the scientists in that last beleaguered stronghold were busy. They invented a new weapon. Fortunately, it is not described very fully on the monuments. But it seems to have been a force that disintegrated the element oxygen, breaking up its atoms and perhaps recombining their protons and electrons into atoms of other elements.

"The besieged inhabitants of that last city armed themselves with the new instrumentality—and burned Mars to red slag. Burned their enemies—if 'burn' can apply to such a process—burned the vegetable and animal life of the planet, as well as the surface rocks, to red slag. Converted the oceans into red deserts by destroying the oxygen in their waters. Disintegrated even the oxygen in the atmosphere.

"It must all have happened rather quickly. The new arm had a dreadful power of destruction. And those who besieged the city did not sue for peace. They devised breathing masks, and armor for their bodies, and made a final, desperate assault.

"They carried the barriers, in spite of the new weapon. Most of the people of the city died fighting in the streets—while that flaming ray was burning up the planet.

"It was too late when sanity came back to the few of each faction that survived. Mars was already wrecked. And still the ray was flaming on. The enemies united in a terrible struggle to put out the destroying ray. Few, few indeed, were left when it was done.

"Peace had come to Mars in the end, but its price had been the life of the planet.

"The survivors united their efforts to erect those monuments we have been deciphering, to serve as a warning to their children, if they were able to survive and to build a new civilization upon the desolated world.

"Aside from the monuments, we have found no trace of them. They must have paid the price of peace in full."

CHAPTER IV

Mutiny!

THE gray, tired-faced old man stopped his weary pacing, and turned to me.

"Please send that to earth, tomorrow, Sidney," he said. I nodded. "It may serve as a warning. It might help to save the earth. Sidney, we must save the earth! We can't let this madness of war burn it out, as Mars was burned out!"

I said nothing. What could I have said? I knew that the iron heel of war had been on the neck of mankind since the first ape-men fought, and I could see no hope of lighting it. I doubted that a world hot with the fever of war would even read the message.

"Another thing, Sidney," and he lowered his voice. "Be sure not to send any private messages—especially any in code."

"I remember your instructions."

"And don't let anyone else have access to the set, when sending is possible."

"Very well. Though I doubt that any of the others could operate it. A good deal of it is my own design, you know."

"Be careful. And I'd better tell you why, so you can be on your guard." He turned to Joan. "You, too, Miss Lenwick, must be on guard. Watch your notes—better keep them locked up, in the safe.

"Both of you may be surprised to learn," he said with deliberate emphasis, "that certain members of our party have been trying to rediscover the ray that burned out Mars!"

"You mean—" I stammered, "you mean—"

"That they want to send that horror to the earth?" Joan finished quickly, her blue eyes wide, frightened.

"They do."

"It's incredible!" I burst out. "After they've seen Mars—"

"The madness of war makes men do incredible things," he said. "They started work on it three weeks ago. One of them must have found something on the monuments that served as a clue. They were analyzing the red slag, deriving the formulae, and trying to deduce the reaction.

"I tried to stop it, of course. Destroyed their notes and apparatus, and told them to leave it alone. But I think

some of them have been working at it secretly, since. I find from the watch that they have been slipping out at night, and there is more apparatus missing from the supplies. They must have a hidden laboratory, out in the hills."

"You think they've succeeded," I asked in astonishment.

"I'm pretty sure of it. Able men, you know, all of them. The best scientists on earth—despite the hellish thing they plan. And they had gone a long way before I suspected anything."

"You think," Joan whispered, "they would send—that—to earth?"

"War makes savages and beasts out of men," Dr. Eldred said. "Anyhow, Sidney, don't send any messages in code."

"I won't," I assured him. "And the men," I asked. "Who—"

He looked at me curiously.

"What difference does it make, Sidney," he asked me, "whether the earth is burned to red slag by the nation in which we were born, or by the enemies of that nation?"

"None. And Doctor, I hope that—that you don't think—"

He smiled a little. "I think I could trust you, Sidney. And Joan. But few are immune to the germs of war. Anyhow, as it happens, you will not be tempted.

"And I may as well tell you, so you can be on your guard. The men are Castelar and Heink and Satsuma. They are the leaders. Sonia Milikov would probably be with them, and others."

Joan seemed surprised. "Not the Don!" she exclaimed. "And Sonia! They seemed so nice!"

"The madness of war is in them. They are not responsible for what they do."

The three came into my little shed on the second day after. It was late in the morning, when most of the party had already gone to the monuments, or were busy about the *Princess of Peace*. I was at the instruments, dispatching the scientific reports that had been written on the night before.

"*Senor* Tancred, you please send this "

Castelar, the suave Chilean, addressed me, thrust into my hand a sheet of paper. I glanced down at it, saw that it was covered with the apparently jumbled letters of a code message.

Was this the information that might make of our earth a barren waste of red slag? It must be. Something made me tremble; I struggled to control my agitation.

I looked at the address. It seemed innocent enough. Leon Monotoya, 14 A 95, Vino del Mar, Valparaiso, Chile. It seemed innocent—but was it?

"Please send it at once," Castelar repeated. "I have business connection in my own land that may not be neglected."

I looked at the three. Anido Castelar, tall, suave, immaculate, but the veiled threat in his black eyes unmistakable. Emil Heink, huge, florid, pale-eyed, coldly menacing. Iko Satsuma, small man, alert, his bright-eyed, yellow face completely inscrutable. The breathing masks that covered the lower part of their faces made their expressions oddly sinister.

They were not openly hostile; they seemed merely tense, anxious.

"My orders are to forward no private communications," I said.

Heink's face flushed red; the Chilean stiffened; the expression of the little Japanese did not change.

"We can make it worth your while, *Senor*," Castelar said quickly. "The message is very important. One thousand *pesos*, gold, to send it at once. *Bueno?*"

"I'm glad to know the value you set on my honor."

The German pushed forward angrily, pulling a thick package from his pocket.

"Nonsense enough," he sputtered. "The message at once must go to earth. Here is reward for you sufficient!"

He ripped open the package, and pulled from it a sheaf of stiff, crackling bills. I saw, to my astonishment, that the denomination of each was one hundred thousand dollars. Each of them represented more actual money than I had ever seen before. And he began dealing them to me like cards!

"One million! Is that enough? Two millions? Five?"

I was staggered. I trembled, and felt sweat coming out on my body.

With a fierce, angry movement, I pushed the money back at him.

Then I saw the deadly little ultra-wave projector in Satsuma's yellow hand, an ominous bluish glow flickering about the point of the tube.

"You will dispatch the message at once," he said, in his dead, unaccented English. His face was still an unreadable mask.

"You don't dare use that!" I shot at him.

A pencil of blue hissed at me, for answer. A hot needle of pain seared across my shoulder; smoke of burned flesh and fabric burst from me. I still wear the mark of Satsuma's ray.

Nausea and weakness flowed over me in a red wave, put out my anger. I reeled, grasped at a table, and searched my brain for some ruse that would give me time to recover from the first shock of the ray.

"You win," I said.

I took the message and turned to the instrument, while the three watched like hawks. I set the dials, began clicking the code letters out upon the keys.

Heink was too shrewd for me. Abruptly he sprang upon me, seized my seared shoulder in a painful grasp, pointing a thick, accusing finger at the xenon tube.

"We are not fools. Your tube is dead; you send nothing!"

I nodded, and handed the paper back again.

Satsuma lifted his projector.

"I won't send it," I said. "And it won't particularly help matters to kill me—no one else can run the set."

A smile came upon the yellow mask of Satsuma's face, a smile that was—dreadful. His dead voice whispered, "Before I am done, you will send it—gladly."

Then Joan screamed at the door of the shed.

Castelar crumpled up the paper, thrust it in his mouth.

Satsuma started toward Joan, then wheeled on me with murder in his bright black eyes. I caught him on the jaw with a fortunate punch; he fell backward, and the little projector clattered from his hand.

Heink was lumbering toward the door, where Joan stood staring, white faced, wide-eyed, terrified. I ran after him.

The two men who had been on guard outside the main valve of the *Princess of Peace*, attracted by Joan's cry, arrived just as we reached the door. Heink turned back at sight of them, and ran to join Castelar, who already had the Japanese on his feet.

The three of them ran out through the back of the shed, and across the red slag toward the low, glistening hills of crimson lava. They should have been followed, of course, at once. But Dr. Eldred was away at the monuments. And my demand that they be arrested resulted only in confusion, which I better understood in the light of later events.

The actual burn on my shoulder was not so serious as the shock of the ray. I was able to keep on my feet for several hours, but Joan insisted upon my going at once

to the vacant hospital bay, where she helped me dress the burn.

Outside again, we found Dr. Eldred, back from the monuments, organizing a party to pursue the three fugitives. Eleven men, armed with rocket-rifles and ultra-wave tubes, set out, half an hour later, toward the red hills.

When they were gone, he had two men take sledges and smash the delicate photoscope equipment beyond possibility of repair.

"Sorry, Sidney," he said, with a sympathetic smile at my damaged shoulder. "But I think it's safer to wreck your toy."

Only four men came back, of the eleven that set out after Castelar and Heink and Satsuma. Two were wounded. And they came hastily and in fear of death.

"We found them, right enough," reported the lank Canadian, John Nisbit, who had been the leader. "And five of my men deserted, turned on the rest of us. Two were out before I knew what was happening. And it was a narrow squeak for us four."

We set a heavy guard that night. And Dr. Eldred arrested two men and a woman, Sonia Milikov, whom he suspected of being in sympathy with the refugees, and locked them in their rooms.

"An ugly situation," he said to me. "But it would be just the same if nationals of the other side had made the discovery. It's just the madness of war, that lets such things happen."

Just after midnight there was fighting on the ship. A half hour of confusion, punctuated with rocket shots, that started with an explosion in a corridor. Screams. Clangs of opened hatches. Shouted commands. Clatter of men running. The sickening hiss of projectors.

I found my own ray-tube, and went first to Joan's room. She was safe, and about to venture out. I made her go back, and started along the corridor to Dr. Eldred's cabin. He flashed a light on my face suddenly, recognized me, and shouted at me to go guard the aft port companionway.

I ran off to obey the order, and lay there, useless, watching the steps, until quiet had returned. Joan found me there, when it was all over, almost sobbing with her ridiculous fear that I had been injured. She helped me back to my room, and dressed my throbbing burn again.

One of the men on watch had been killed, we found. And two more badly injured. The three prisoners were gone from the ship. And eight others. They had carried arms, had taken supplies sufficient to last them and their comrades in the hills for several days.

At intervals, through the rest of the night and the following days, rocket projectiles fired by the men in the hills fell near the ship, exploding with sharp, angry *snak's*.

Next morning the remaining members of the party set up a demand that we take off for the earth at once, leaving the deserters to the fate that would very soon overtake them upon the lifeless wastes of red slag.

Dr. Eldred, however, refused to listen to them. He posted lookouts on the high bridge of the *Princess of Peace*, set a heavy guard about her—and then went, alone, back to the monuments.

"I'm almost at the end of the inscriptions, now," he said. "I'm finding something very important—and rather astounding. What the Martians did after the monuments were finished.

"No good to talk of starting back. We couldn't run the ship without the men who have deserted."

He donned his oxygen mask, picked up a little pack he had ready—containing a lunch, I knew, and a flask of water—and trudged off across the red lava toward the pillars of white metal.

We saw nothing, that day, of the deserters. The rocket projectiles continued to fall, through the morning. Their barking explosions ceased, however, in the afternoon. The low red hills seemed to stare at us, ominous and threatening, in implacable silence. Dr. Eldred did not return at sunset. Nisbit, who had been second in command, and two others, ventured out into the chill dusk to search for him. The vicinity of the monuments was deserted.

Dr. Eldred had vanished!

At the time, we could only suppose that he had been captured by the deserters. Far indeed was that from the truth.

CHAPTER V

Monsters out of Mars

THE mutineers came out of the dark hills on the second night. My shock from the ultra-wave burn having been worse than I realised, I had been forced to return to the hospital bay, despite myself, and so had no part in the battle.

On the white, narrow cots I had four companions. Ferrero, whose leg had been torn off by a rocket projectile; Casey, who had been stabbed in the lung with a knife; Pallin, whose left arm had been amputated because of ultra-wave burns; and Kennedy, whose eyes had been burned out with a ray.

It sickened me to listen to their groans in the night. To listen . . . and think they had been fine young men, brave, splendid, taking great risks for the science they loved—now helpless, disabled, suffering, because of this madness of war.

The attackers had slipped up near the ship before they were discovered. The burst of rocket shots came suddenly. And a thin, fearful scream. For a moment the whole ship was heavy with stillness; then came swift confusion of sound, as the defense was organized.

I was not able to go below. But I had Joan—who was acting as a nurse—bring my ray-tube. I got myself to a chair at the door of the hospital bay, and waited there, in case they stormed the ship.

But our men had been ready. Flares lit up the red lava about the ship, so that the men on the observation deck could see the attackers, shoot them down with the large rockets mounted there.

In five minutes it was over. The deserters were driven back, leaving three dead or dying, Satsuma and two others. We lost but one—the man who had screamed. An ultra-wave beam had burned his head off.

They brought Petroff and Tunis into the sick bay to die. I was sorry for them, even if they had been enemies. I knew they had fine minds. Tunis had been a poet and a gifted musician, before this madness of war had seized him.

By that time we had given up hope that Dr. Eldred would return; we were all considering starting back to earth.

Angular, lean John Nisbit, now in command, came into the hospital on the morning after the attack.

"How're you doing, Tancred?" he greeted me, with a cheering smile.

"I'll be up in a day or so," I assured him. "The shock of that accursed ray, you know. The burn itself isn't serious."

"You think," he asked soberly, "that you could run the *ionodyne* generators? You must be pretty well up in electronics."

"I don't know." I considered. "Might, after a fashion. Of course that is outside my field. You mean—"

"We must try to get back to earth—if we can. Dr. Eldred was the navigator, of course. I don't know who can calculate for us, in his place."

"Heink—if he were with us—"

"Exactly—if he were here. There are a good many highly specialized jobs about running this ship. And the men that were trained to fill about half of them are against us."

"I might run the *ionodynes*—though Castelar could do it better. But who would take the converters, since Petroff is dead? Sonia—"

"It's one hell of a mess!" He bit his nails in desperation.

He sat staring at me for half a minute, and said, "Too big a risk! We'd smash up, sure. Better wait and try to patch up a truce— Had a message from them, this morning.

"Ueland came, waving a white rag. The guard stopped him, and called me out to see him. He took me off to one side, and told me that Heink and Castelar have built a machine to generate the ray that burned out Mars."

"What's that?" I gasped, swept with alarm.

"An electromagnetic vibration," he explained, "that disintegrates oxygen."

"Dr. Eldred told me about it. But that will wipe us out!"

"It might. Usland said they had built the thing, in a laboratory they have hidden in the hills. Said they have it trained on us."

"Just what did he want?"

"Ship surrendered. Us to agree to help work her back to earth."

"And you told him—"

"Well, in the first place, I didn't think they had the machine. It must be rather complicated, and I know they haven't a great deal of apparatus. Then they wouldn't dare use it, if they had it. It would wreck the ship, burn up all the supplies.

"I told Ueland to go back and think up another one. He went off in a rage, swearing we'd be burned to red slag in an hour."

"He did?" I was really alarmed. I knew that our opponents were very able scientists.

"He did. And the hour was up fifteen minutes ago. A nervous wait, I admit. Didn't tell anybody else—I was sure of my ground, and afraid there might be a panic."

It was late the next day when we saw the Martian flier.

I had left my bed; I was able to totter up to the observation deck to watch.

It was sailing over the low red hills, from the north. The men out in those hills were already firing on it—simply because their nerves were ragged, I suppose, and it had alarmed them. We could hear the crackle of their exploding projectiles, through the open ports.

It was only natural, of course, that the Martians should fight back. And natural, too, that they should class us with the men in the hills.

THE flier was a long green arrow. It must have been two hundred feet in length, with a diameter of hardly ten. Little clouds of yellow gas were jetting from its stern, forming a vague track behind it.

Already it must have been crippled, when I first saw it. Its bow was slanting downward; soon I saw a black hole gaping in its glistening green side.

But it was fighting back. Little spurts of icy blue light were darting from small black ports along its sides. Tiny purple sparks were floating down from it, dancing and glittering in the air. Sparks that exploded when they struck, with silent, terrific, devouring bursts of white flame.

Chill blue light jetted for an instant toward the *Princess of Peace*—and fused a clean, six-inch hole through her hull, into the power rooms, wrecking one of the great *ionodyne* generators.

That brought us into the battle. We fired a burst from the big rocket-rifles on the observation deck, and the green arrow of the Martian vessel fell on the red slag, just at the foot of those low, glassy scarlet hills.

That ended the fight for the Martians. Their vessel was completely wrecked. They crawled from the debris—those that lived—and got back into the hills. We glimpsed some of them through binoculars as they made off. Long, greenish, snake-like things, writhing furtively from the wreckage, toward the hills.

Ueland was back, waving his white shirt, in half an hour. Nisbit received him at the ship's main valve.

"We give you one more chance to surrender—" he began.

"Enough of that," Nisbit cut in. "You haven't that weapon, or you'd have used it on the green flier. And let me warn you not to quarrel with the natives. You might want to ask some favor of them, after we are gone."

"Gone?" the man echoed, and went white. "But you can't fly the ship."

"Not so well, perhaps. But we can get away from here before more of the green fliers come back to finish the fight—this one was probably not a fighting ship at all; the next won't be so easy."

"We will come back," Ueland offered hastily. "Forget all that—"

"If you want to surrender," Nisbit said, "give up your arms, and help work the ship to earth, you may come aboard."

Ueland seemed angered. "No!" he shouted. "We keep our arms!"

"You will need them," Nisbit said, "when the green ships come."

"Very well," said Ueland, "we accept."

He ran back a little way, and waved the white shirt.

The ex-mutineers came down from the hills, bringing with them a dead Martian from the wreck.

A weird thing. It was hard to think that it had been intelligent. Its body was slender, almost snake-like, nearly twenty feet long, tapering at each end into a thin, whip-like, muscular appendage.

The middle part of the body was thickened; it contained the vital organs, the great brain; four black eyes were set in it. It had no limbs save those formed by the tapering ends of its body. (Those we had seen leave the green flier had crawled like snakes.)

The living thing must have possessed a certain strange beauty. The green skin was brilliant, velvet-soft, marked with queer, geometric designs in gold and black.

It had been crushed when the flier fell; its mangled internal parts were obtruding through the bright skin; yellowish, strange-smelling blood oozed from it.

Dr. Eldred was not with our recent enemies, nor had they seen him. We were sure, then, that the Martians had captured him.

We were surprised, of course, to know that any of the beings still lived. But we knew they must be descendants of those who had built the monuments on the plain. The green ship had appeared, Heink said, from the mouth of a cavern in the lava hills.

It was twenty hours before we were able to take off. The hole that the Martian weapon had fused in the hull had to be repaired, the generator that it had wrecked, rebuilt. The valves were to be sealed, the entire set of

generators to be retuned, the elements of the course calculated.

In the face of greater peril, the men forgot their recent enmity. Heink fell at once to the vital calculations; the rest returned to their old stations, or took new ones, as Nisbit ordered.

Three hours before we could take off, two more green arrows appeared flying swiftly over the red hills westward. And chill, pallid blue lights spurted from the low mountains that hemmed us in, at a dozen points. We were surrounded!

"We've simply got to trust the other men," Nisbit muttered to me.

He ordered the weapons returned to our former enemies. The foes of a few hours before stood shoulder to shoulder, waiting for the Martian attack, their late quarrel healed by this new danger.

The repairs were completed before the Martians closed in.

The *Princess of Peace* drove upward from the hill-rimmed plain of red lava, sweeping back with us to the war-ridden planet of our birth.

TWO days later, when we were a million miles out in space, and Mars was a little ocher-red moon in the star-bright inkiness of the void behind, we saw five green arrows, following. Five long, slender ships, that had swept out after us, from Mars.

We crowded on all possible power, and still they gained rapidly.

Nisbit served out all the arms on board, and we stood together at our posts—we who had been at each other's throats until this more terrible menace beset us—waiting the seemingly inevitable conflict.

Then the men at the telescopes reported that the ships were not following exactly upon our course. In the next hour they passed us—eighty miles away—and drew rapidly ahead.

Inexplicably, we supposed, they had failed to see us.

Twenty-nine days later our flight was ended upon the tranquil surface of San Francisco Bay. Tension had risen among us, as we approached the earth. But there had been no fighting, for every man was needed at his post; discord would have meant death for all.

San Francisco we found half ruined. And only a vast crater of shattered debris remained where Oakland had been, between the Berkeley hills and the bay. *Ionodyne* fliers, a month before, hanging above the atmosphere, had dropped hundred-ton bombs upon the cities.

Small craft soon approached the *Princess of Peace*. An officer, who said his name was Smithley, came aboard from a military helioplane, and requested that Nisbit come at once to confer with General Houston, who had command of the American Armies along the Pacific. Nisbit asked me to accompany them, since I had been the confidant of Dr. Eldred.

We saw a family, as we went over the shore, that typified for me the fruits of war. A tiny shack, upon the torn ruin of the water-front, built of shattered concrete blocks, roofed with odd scraps of twisted sheet metal. The blind wreck of a man was sunk in hopeless dejection before it, only the hideous scar of an ultra-wave burn where his face had been. A hungry blue-faced child was crying at his knee. A little distance away, a worn, broken woman, in tattered rags, was digging wearily in the mounds of wreckage, with a crooked stick for a spade.—This, where, a month before, the heart of the world's busiest harbor and *ionodyne* terminal had throbbed mightily with commerce.

As the helioplane carried us down the peninsula, Smithley told us of the attack from Mars.

"You certainly roused a hornet's nest up there," he began. "They've been raising hell here for two weeks."

"Martians on earth!" Nisbit and I cried together.

"They're supposed to be Martians. Long green ships that flash through the air—or up out of it—faster than any *ionodyne* flier ever built. Devilish weapons, they have, too. Little purple sparks that float down—and wipe out anything they strike!"

I stared through the ports of the cabin, at the war-torn country below, struck dumb with astonishment that Mars had attacked our world.

"Five of the ships," Smithley went on. "They destroyed an American fleet, last week. An *ionodyne* fleet, that was bombing Mexico City. Eleven of the big fliers, but they couldn't do a thing against the Martians. Just one got back.

"But I suppose we're even, at that. On the next night they wiped out an enemy fleet that was crossing the Pacific from Tokio. In fact they have just about put a stop to the war, smashing at the forces of both sides."

General Houston we found, harassed and puzzled, at his headquarters in a dilapidated farmhouse. He asked Nisbit and me a thousand questions about Mars, and the Martians. We supplied all the information we could. He had his secretary take it down, but it seemed to afford him little satisfaction.

"Why the hell did the things come down here?" he asked, almost querulously. "God knows we had war enough on our hands, without them interfering, smashing our air forces, and those of the enemy, too, until we're both helpless."

We failed to answer his question. At that time, we had no idea of Dr. Eldred's part in the attack from Mars.

We returned to the *Princess of Peace* when the inquisition was ended; in this war-torn land there was nowhere else to go.

Next day I hooked up the ship's teleview set, which had been useless, out beyond the Heaviside Layer. We gathered before the great screen in the salon, to listen to the news of war, and the puzzling reports and conjecture concerning the five ships from Mars.

That night we picked up Dr. Eldred's broadcast.

It was sent on a broad wave-band, interfering with stations on all the public frequencies. Thus all the world picked it up. And soon all the other stations were silent, as the whole world watched and listened in astounded fear.

Upon our screen appeared the interior of a strange room. A tiny, cramped room, whose oddly curving walls appeared to be of polished, bright green metal. Weird, incomprehensible apparatus crowded it.

CHAPTER VI

Eldred Speaks!

DR. ELDRED stood in that remarkable room. Weary, he looked, to me, exhausted. His old body was thin, emaciated. But he held his majestic head erect; his lined face was firm with a great purpose; strong light of determination burned in his eyes.

Some adjustment he made, of the fantastic apparatus beside him. Then he turned, so he seemed to look at us from the screen. He ran his thin fingers through his long, tangled hair, with that old, familiar gesture, and began to speak.

"People of the Earth," he said, in the same quiet voice, that was kind, and sad, and yet had a ring of steel, "I have a message for you.

"Some of you may recognize me. But I shall introduce myself. I am Nyland Eldred. Many years ago I

invented the *ionodyne* flier, from which you have been dropping bombs upon your cities, to maim and slay your women and children. I planned the Federation of Man, that was to unite you all, and end war. And you cast me and my work aside.

"I went to Mars. Now I have come back, to find you fighting. Why are you at war? How did your quarrel begin?" His kind, weary voice was touched with scorn. "A drunken soldier threw a cabbage!"

A long time he was silent, gazing solemnly from the screen.

"In all history, our civilization has known prolonged peace just once. The peace was the *Pax Romana*, enforced by the legions of Rome. And peace can return only when the whole world is united, a single nation, as all the civilized world was under Rome.

"People of the Earth, I tried to give you union and peace under a government of yourselves. You refused it. Now I am going to bring peace to you through war, as the legions of Rome brought it to the ancient world.

"You have failed to find peace on earth; I will give you the peace of Mars!

"For I found living beings on Mars. They may look repulsive to you. But they long ago discovered the vanity of war. They are willing—and able—to end war on earth.

"The conquest of the earth has already begun. Henceforth it will be a province of the planet Mars, ruled by Martian governors. You may feel that the price is great—but you must find peace or die!"

The weary voice paused. Dr. Eldred looked from the screen, for a long time, kind, sorrowful, but stern. Then he said,

"People of Earth, look upon your future rulers."

He turned, gestured. Two things came writhing into the cramped little room with him.

Long, slim, sinuous bodies of green, marked with black and gold. Four strange black eyes oddly placed in the middle of each. Ends of the bodies tapering into long, flexible tentacles. Weird, they were, as things of flesh well could be. But there was a certain beauty in the slender strength of them, in their bright, geometric markings.

The things glided into the little green room with the scientist. He dropped a hand upon one, patted it kindly. It coiled a long, serpentine tentacle about his body, softly, caressingly.

To me, there was something horrible in those long, snaky bodies, with great eyes staring from their middles. Something uncanny and repelling. Even the beauty of their markings of green and gold and black seemed sinister. I knew that I would fight to the death before submitting to the dominion of such monsters.

Gasps of horror came from the little group about me, in the salon of the *Princess of Peace*. Joan Lenwick seized my shoulder, peered up at me with a white face.

"Dr. Eldred can't mean that!" she cried.

"He must mean it," I said. "His Martians have already crushed our air forces."

"It will only mean more war," she whispered. "Not peace. No human being will ever submit peacefully to those—*things!*"

She shuddered.

"They seem terrible just because they are strange and unfamiliar," I reasoned. "The Doctor seems to be on good enough terms with them."

I looked back at the screen, but the picture had faded.

Lank, lean-faced Nisbit leaned across to me. "Eldred's crazy!" he cried. "No peace in this! It means war—and more war!"

I was chief of communications on the flagship of the new fleet that gathered one gray night five weeks later, over the North Atlantic. Emil Heink, my late enemy upon Mars, was commander of the fleet.

For eleven days the five green arrows from Mars had hung motionless, twenty thousand miles from the earth, presumably awaiting reinforcements. This first fleet of the Federation assembling in the stormy night, was to sally out into space, to forestall the attack.

Our *ionodyne* fliers were of the latest design, swift and powerful, heavily armed. They were small, however; they numbered only sixteen; they had been built very hastily; the crews were mostly ill-trained.

A great enthusiasm filled all of us. Ours was the first fleet of the Federation. We represented the whole earth. We were determined to fight for our planet as men had never fought before. It mattered little to us that the five green arrows had been victorious in every combat with terrestrial forces. We were undaunted by the fact that they had annihilated the aerial armament of every nation.

Just two weeks before, the Federation of Man had become a reality, ratified by every government. All earth was united in it; the armament of the Federation was to defend the whole world.

THERE had been protest to the change. But the menace of Mars had swept away petty national quarrels. And it was agreed that a planet divided against herself must fall in interplanetary warfare.

Dr. Eldred's old plan for the Federation had been ready to hand. The Tower was waiting by glistening Lake Geneva, desks ready for the representatives of each nation to take their seats in the great hall of council. Every problem of organization had been considered and settled, long years before. The earth donned the Federation as easily as a man slips into a well-tailored garment.

The workshops of the world were soon busy, night and day, fabricating ships for the new fleet of the Federation. Hastening to offer my services, I was accepted as a communications officer.

Only a week before I had left Joan, aboard the old *Princess of Peace*, which still floated beside shattered San Francisco. She did not ask me to stay, but she was crying when we kissed and parted. I did not know, then, that she had tried—in vain, of course—to enlist for service in the new fleet. I had no idea what she planned.

Before sunrise we rose swiftly out of the cold gray clouds that rested upon the stormy Atlantic where we had gathered, the fifteen other vessels following in a gleaming line behind.

Above the sky grew darker blue and darker, until it was black, stars bursting out within it, in hot glory. The earth drew away below, a misty globe, and we sailed out into vacant space.

Never shall I forget the elation that filled me, banishing, for a time, all my fear. The whole planet was united behind us. We were the first fleet of the Federation of Man.

Twenty thousand miles ahead, the five slim arrows from Mars were motionless, waiting . . .

Busy as I was, handling the photoscope that transmitted orders to the other vessels, I found time to look back with pride in my heart at the misty, luminous sphere of earth, swung in rosy glory.

My mind, however, was filled with more personal matters as we drew near the Martian fliers. I thought a good deal of Joan Lenwick, and wished that I could see her, for a few minutes, before the encounter.

The unexpected fulfillment of my wish, however, brought me anything but comfort.

We were ten thousand miles out—midway to the waiting arrows—when I heard an observer report to Heink,

"A ship ahead of us, sir. A dome-shaped *ionodyne* flier. Seems to be moving out toward the Martian fleet."

"What's that!" Heink ejaculated, and ran to the telescope.

"The Princess of Peace!" he cried, from the instrument.

"Contact her commander, Tancred," he barked, turning to me. "She has no business out here!"

With trembling fingers I got the photoscope beam on the ship ahead.

"Flagship calling *Princess of Peace,"* I stammered.

"Hello," came the quick reply. "This is the *Princess of Peace."*

"Give me teleview contact with your commander."

The teleview screen at the end of the bridge snapped to life. And upon it was the face of Joan Lenwick.

"Joan!" I gasped.

She looked at me with an odd smile, then briskly saluted Heink.

"Miss Lenwick!" he cried in astonishment.

"Captain Lenwick, sir, of the *Princess of Peace,"* she said.

"What are you doing here?"

"We have come to fight for the Federation of Man."

"But—your crew—"

"There are many of us on earth ready to fight for the Federation. Most of my men have seen service on *ionodyne* fliers. I was chosen captain because I had had the experience on Mars—and because the idea of coming was mine."

"You know that old tub is useless—she wasn't built to fight!"

I saw a glitter of moisture in her eyes. She replied evenly,

"We are armed, sir!"

Trembling, I turned to Heink. "Send her back," I pleaded. "She'll only get herself killed—"

He did not even look at me, but he said to Joan, "You could only sacrifice your ship needlessly. I command you to return to the earth."

"I refuse to obey." Her voice trembled.

Almost angrily, he said, "I am Admiral of the First Fleet of the Federation of Man!"

"And I am Admiral of the Second Fleet of the Federation of Man!" she replied. "I suggest that it is time to prepare for action."

Disregarding discipline, I ran toward the screen.

"Please, Joan!" I cried. "Please go back. Oh, Joan—"

She looked at me, and I saw heartbreak in her eyes.

"Sidney," she whispered, "do you think I could wait, back there, when you are going out—out—," she choked, "out to—*die*—"

Her image vanished from the screen, leaving me unable to attend very efficiently to my duties. Cold, dreadful certainty numbed me. I knew that the *Princess of Peace,* in the van of our force, would be destroyed by the first blow from the Martians. Joan was throwing her life away, and nothing I could do to prevent it.

In another hour the enemy were in plain view, to the unaided eye. Five glistening emerald arrows, suspended motionless against the darkness of space. Ominous, menacing, fatal.

The silvered dome of the *Princess of Peace* was still between the lines.

We fired our first rockets, being forced to aim perilously close to the clumsy vessel that Joan commanded.

Chill blue flame spurted from the green arrows ahead.

Then suddenly, unexpectedly, they retreated. They fled away from us, at a speed our fliers could not match. They were swallowed up, forever, in the darkness of the eternal void.

FIVE years later the retreat of the Martians was still a mystery. During the interval, no green ship had been seen. But attack was still expected. The powerful fleets of the Federation of Man were always ready. Men, in their sense of union against the danger from without, were swift forgetting old sectional fears and hates.

When the green arrow of the Martian flier was seen over the Sahara, the fleets of the Federation were swiftly in the air. Scouring the atmosphere above all Africa, and scanning the sands of the desert, they found Dr. Eldred.

The ship that brought him escaped. They found the old scientist trudging wearily toward the nearest oasis, laden with a pack that contained food and water.

Arrested at once, he was taken to Lausanne, imprisoned in the Federation Tower that he himself had built, and charged with being a Martian spy, a traitor to man.

As I have told in the beginning, I found him in a cell in the tower.

"You promise solemnly not to reveal the story until your best judgment tells you it can be done without danger to the Federation?" he asked me, as we sat face to face in that long room, with azure Lake Geneva glistening below the window that was barred with deadly blue ionic beams.

"I promise," I said—though reluctantly.

"In twenty years—or fifty—the truth might do no harm."

He pushed his long fingers through his hair—which was thinner, now, and white—in the old gesture I remembered so well, and began.

" I had supposed, of course, that the Martian race was dead. I had no idea, until I had almost reached the end of the inscriptions, that those who built the monuments had been able to survive.

"But I learned that they had retreated to a series of great caves beneath the barren surface of the desolated planet, where water and breathable air remained. They had planned, so said the records, to enlarge these caverns, connect them with others, rear a new race in them.

"When I left the *Princess of Peace,* on that last morning, Sidney, I had already finished translating the inscriptions. I knew approximately where to look for the cavern, back in the red hills, not far away.

"I walked on past the monuments, and out into the lava hills. Before noon, I found the rift, and entered. The descending passage was narrow at first, and dark. It widened, slowly. At length I came out into vast spaces, illuminated with artificial light—blue-white, dazzling globes, suspended from the rocks. The floor of the caverns was covered, there, with luxuriant gardens. Grotesque plants, violet-colored and blue, that bore fruits as large as my body.

"I was soon in contact with the Martians. You have seen them. Elongated green bodies, mottled with gold and black. Highly intelligent, of course. They received me with the interest and consideration that I had expected from such civilized beings.

"I had prepared myself, of course, to communicate with them. I had a fair knowledge of the written language on the monuments. I brought with me pads of paper, pen, colored pencils. Oral intercourse was, naturally, out of the question for the time being—I later discovered, in fact, that the Martians have no vocal organs; their informal communication is by use of electromagnetic waves.

"Anyhow, I got into contact with the three who found me there in the strange cave-garden. I had an introduction of myself already written out, on a sheet of paper. It was hard, at first, to get them to notice the paper, because they were so interested in the rest of me. Then they had

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THE STERILE WORLD

By **Warren D. Sanders**

(Illustration by Paul)

The temporary refuge was all they needed, for the death ray made short work of the monsters. The last one fell with a sickening plop.

THE STERILE WORLD

SHORTLY after the Rebellion of the Workers had flared into active strife, the Old Race saw the beginning of the Great Cessation. For over a year, not a single child had been born!

Such were the findings of the International Board, and even the most skeptical were finally convinced that mankind was face to face with disaster in a most amazing form; complete, world-wide progenitive sterility! Furthermore, the appalling affliction extended to animals of the lower order, as well. Only those creatures hatching from eggs were unaffected, multiplying with normal frequency. Truly, an alarming situation!

Each warring faction at first had been inclined to lay the unheard-of state of affairs at the door of the other. Then the International Board was formed and hostilities were suspended while perplexed biologists investigated the enigma; a menace which threatened the eventual extermination of friend and foe alike.

Now, it is impossible for the modern mind adequately to picture conditions as they were on Arth* during the twenty-fourth century, just prior to the Great Cessation. It is almost inconceivable to us that the history of the Old Race should be, as it is, little more than a record of interminable warfare. It actually would seem that the business of war was the paramount issue of their lives. The slightest disagreement was sufficient to plunge the entire world into terrible, decimating conflict, and there are instances of record where the provocation seemed to have been deliberately brought about.

Of course, there always were extenuating circumstances to justify the wars. Founded as it was, on a base of superstitious fear, intelligent design in the pattern of the old civilization could not logically have been looked for. As an example, individuals were permitted to hoard and call their own, unlimited quantities of any or all the products of nature and life's essentials. Even the surface of Arth itself was divided by boundaries into separate parcels which were the private property of this or that individual. Imagine the confusion that must have resulted from such practice!

Also, hereditary defects of mind and body were the rule, rather than the exception, but unimaginable as it seems, eugenics in any form was frowned upon. Because of childish, distorted conceptions of religion, children were allowed to be born to any and all, regardless of physical deficiencies, and the people were shocked and horrified by every suggestion that might have led to selective mating or intelligent control of the population. Then, too, those were the days before the Maturnator had been developed, and mothers perforce carried their progeny for the full period of incubation, thereby infusing into the newly forming characters what was known as "instinct"; a certain, uncontrollable reflex action to any given circumstance. It is, therefore, easy to understand that a race so propagated would tend only to hinder its own ultimate evolution into a life-form of conscious mental control and pure emotion.

But such was the status of the Old Race at the time of the Great Cessation, when it found itself suddenly confronted by extinction in the form of universal sterility.

Numberless examinations and experiments were made. The war was completely forgotten and every resource turned toward a solution of the terrifying, and seemingly insolvable problem. The cause of the scourge was never discovered, and though science worked with the fervor of desperation, the barren years rolled by and old age took its inevitable toll. Children and babies grew to maturity and took over the task. But unreplenished, Arth's huge population became constantly more feeble and dwindled at an

WARREN E. SANDERS

WE are apt, in our busy lives, to forget the tremendous importance of various rays and emanations which beat upon us every second in our lives.

Not so many years ago, for instance, it was discovered that those working with intense X-rays were deprived of their reproductive powers. Human animal instinct, thus, can be made sterile at will. Many scientists today hold the view that the vanishing of such huge beasts as the Dinosaur group was caused by the too intense application of ultra-violet rays, as we have them today.

At one period of the earth's evolution, a heavy fog planet surrounded the earth and the atmosphere was much denser than it is today. This effectively cut off the ultra-violet rays from the sun. Later on, as the fog lifted and oceans were formed and the sun began to beat upon the earth, the ultra-violet radiation proved to be too strong for the Dinosaur group and they were cut off.

Suppose it were possible to train upon the earth, rays of the strength of present X-rays or stronger. It takes no great imagination to figure out that all living things under the effect of these rays would become sterile and in time the world become depopulated of all living things. This is one of the possibilities that our author envisaged in this powerful tale, which we heartily recommend to you.

*Known to the ancients as Earth.

alarming rate.

With the passing of time, scattered remnants of the Old Race diminished and disappeared until, in a dilapidated cottage on the outskirts of a once teeming city of mid-western Noma, the continent known to the Ancients as North America, there lived a feeble centenarian who to the best of his knowledge was mankind's sole remaining prototype.

In his youth, the old scientist had been only one among the vast army working in a magnificent laboratory devoted exclusively to study of the universal enigma. He had seen the race grow old and helpless. He had seen his associates, one by one, give over their tasks. He had buried his assistant and worked grimly on, alone. At last had come success—and failure.

The composite emanation from a blended beam of alpha, beta and gamma rays was the answer! Feverishly, the old man turned to his televisor to spread the news, but Arth had gasped her last. One after another, he explored every wave-band on the scale, only to be greeted in each instance by the same response—blank, desolate silence.

Mentally unhinged by the shock of realization, he had fled the ghost-city. For weeks he had lived at the cottage; the dilapidated home of a once prosperous farmer, subsisting on fruits and herbs that had not been cultivated for three-score years.

A late afternoon sun hung low in a cloudless, midsummer sky. Lush, green vegetation grew all about in a riot of wild profusion. A mocking bird, perched on a swaying twig, burst into sudden, carefree melody, blissfully unaware of human tragedy. A gentle breeze stirred the leaves and a multitude of insects carried on their busy industry in the security of the tall grasses. As was his wont, the old man lay on a pallet of rags in the shade of the hut, gazing up the wide, glassy road of amber crystal that passed close by and led toward the deserted spires of the dead city, visible on the northern horizon.

High above the skyline, a speck of silvery light materialized and approached at breathless speed. Out of the deep blue it came closer and closer; a mirror-bright ovoid of polished metal; a space ship of vast proportions. It settled lightly to the road a few hundred feet north of the hut. Massive supports sprouted from its under side and rested solidly on the amber pavement. Noiselessly, a round port opened and a railed gangway slid out.

Although he appeared to be staring directly at the ship, the old man gave no indication that he had seen it. Not a muscle moved; he lay perfectly motionless.

CHAPTER I

A Lone Survivor

ABOARD the *Diana*, Therol Antrim II waited impatiently while the massive door backed rapidly out of its threads and into the arms of the waiting gimbals which swung it to one side. For years he had planned and dreamed of the moment when he would first set foot upon Arth, favored daughter of Helios,* and by virtue of his rank, he was first through the port and down the gangway.

Thal Vedor, second in command, and Elta Entriss, Navigator and highest ranking woman on the ship, were right at his heels. Those of the crew not on duty filed out and formed excited groups that drifted from one point of interest to another; examining the shrubbery, the grass and even the soil. In a very few minutes the huge ship had disgorged fully a hundred people.

They were remarkable in many ways, these visitors from another world. Perhaps the most astonishing thing, had a member of the Old Race been there to see and hear, would have been their language. They spoke a modified, but very excellent English.

And there was their unique attire. They had long since abandoned man's primitive inclination toward uncomfortable, health-killing costume. A sleeveless, knee-length robe worn over short trunks was belted at the waist, and soft, flexible sandals completed their entire apparel. Unqualified good health was obvious. Their skins were smooth and tanned to the color of new bronze. Every individual seemed to be an exemplification of perfect physical development, and their level, fearless eyes radiated strength; strength of mind and character.

Absolute sex equality was denoted by the number of attractive and distinctly feminine women that mingled with the laughing, carefree groups scattered about the ship. All were bareheaded and wore the same type of costume, but the soft, colorful fabrics of the women made sharp contrast with the plainer robes of the men. The latter wore their hair cut fairly short, while the longer tresses of the women were held in place by bright, jeweled headbands.

After days of confinement aboard the ship, Therol was grateful for the pleasant warmth of the sun and the fresh, fragrant atmosphere of a verdant planet. Drawing in great breaths of invigorating air, he inspected the surrounding landscape and his roving eyes soon fell upon the figure of the old man beside the hut. His handsome face lit up with excitement as he grasped the arms of his companions and cried:

"Look Elta! Thal! There *are* survivors, and against all probability we have landed near one. Come." And the three set out down the road at an eager pace. When they stood over the recumbent form, however, their exultation quickly gave way to disappointment.

The old man was dead.

A search of the hut revealed nothing, and it was not until years afterward that a monochord reel containing a record of the centenarian's fruitless achievement was unearthed in the deserted laboratory, and his identity established.

Without fuss or sentiment, the body was carried to the ship and placed in a heavy, crystal coffin to which a power line was connected. A switch was thrown and for several seconds a scintillating arc of ruby fire blazed in the heart of the box. The current was then cut and the lid raised. Except for a small glass bulb scarcely larger than a man's thumb, attached to an electrode at one end, the crystal box was empty. This glass capsule was carefully removed, labeled and filed in a small steel cabinet.

Thus did the ashes of the last man of the Old Race come to rest in the sepulture of the *Diana*, first space ship from the Uplands of Juno, on the planet Vena.*

SEVERAL days later, Therol stood before the delta-ray screen in the navigating room and studied an imperceptibly spinning, six-foot globe depicted thereon. A sprinkling of tufty, white cloud spots failed to disguise the twin continents floating upon a shimmering blue sphere capped with white at either pole. Without doubt the continents were Noma and Soma, and the globe itself was Arth, viewed across many thousands of miles of space.

"Course checks," remarked Therol after a series of calculations. "A little more speed and we will synchronize with the surface."

Elta spoke a few brief words into the engine-room communicator and the *Diana* jumped smoothly forward. When the short period of acceleration was over, the projected

*The Sun.

*Known to the ancients as Venus.

image of Arth was completely motionless. Satisfied, Therol sat down at the delta-ray controls and peered intently into the hooded visor of the range indicator. Expert fingers played over a complication of dials as he made several quick adjustments, then straightened up and pressed a button. Simultaneously, the view on the screen changed.

In stereoscopic clearness, the southern half of a great, shimmering lake appeared. On the shore of the lake and in the exact center of the screen, lay a vast network of tangled lines and varicolored checkers that comprised the dead city of Chico.*

"All set, Therol?" asked Elta, and receiving a nod in reply, she again spoke into a microphone:

"Ray crew stand by."

A small, green bulb in the Navigator's control panel flashed an acknowledgement, which was followed immediately by the throbbing vibration of massive generators deep within the ship's vast belly.

"You have your target," continued Elta, and the green bulb flickered again. "Cut three banks of C-ray into the K-beam. Range three, point two-six-nine. Ready—" and at another nod from Therol:

"Contact!"

For several minutes a red bulb on the control board glowed dully, then winked out. Therol had not taken his eyes from the screen, and a pink haze enveloping the ancient city told him of the accuracy of the ray crew's marksmanship. The pink haze deepened into a bright, sparkling red and the checkerboard of streets and buildings seemed to writhe for an instant before collapsing beneath a slowly billowing cloud of smoke and dust.

"And—that's that," sighed Elta, as she threw out the delta-ray switch and sat down beside Therol, who settled himself comfortably into one corner of the divan before replying:

"Yes, I too hated to see the old city destroyed, but the location was ideal for the site of the new city. Besides, the work of Thal and his crew of builders will be materially hastened by the salvaging of *crysteel*, which alone was not converted into hydrogen and burned by our K-beam. That was Thal's idea. As you probably have already deduced, by using as we did the three banks of C-ray, the K-beam dissolution was retarded and the liberated hydrogen, saturated with the C-ray, did not explode in the customary manner. It burned evenly, and the resultant conflagration, the intensity of which closely approximated that of the sun, will leave only the *crysteel*, conveniently smelted down for future use."

"Oh, I know it had to be done," replied Elta. "But somehow, I hated to see the old city go. Of course, there are hundreds of others, and some day . . . when we return, I shall explore them to my heart's content . . .

"But right now I must correct our course. Vena, Therol? Aye! The Summits of Juno—home!"

Suiting action to her words, the *Diana's* energetic young navigator studied her charts for a moment, set up a string of figures on the calculator and issued instructions to various parts of the ship. After several busy minutes, she again turned to Therol.

"Have you given up hope of finding another survivor, or shall I post the regular delta-ray lookout?"

"Post the lookout, by all means," replied Therol. "I suppose it is a useless gesture, but you never can tell. Nature does strange things, and human life is most tenacious. While it would seem incredible, somewhere on Arth there may be a struggling little group whose ancestors somehow evaded the omega ray. Somewhere, there may be the nucleus for another barbarous civilization. If so, they must be found and our plans altered . . ."

Elta nodded and turned once more to her instruments. Therol was right, of course. But Therol was nearly always right, for that matter. His keen, logical brain, coupled with an unsurpassed scientific and philosophical training, had won for him the highest position in the Summits: Chief Councillor and virtual ruler of fifty million people.

THE sagacity of posting a delta-ray lookout was evidenced in less than an hour. A tinkling chime called Therol's attention to the ship's communicator grid and the pretty face of the lookout appeared as her voice sounded from the speaker:

"Peculiar markings near Arth's south pole. Close-up shows signs of human activity. Your wishes, Councillor?"

"Thanks, Carmin," acknowledged Therol. "Transfer your circuit to me and stand by." Then to Elta: "What is our position at present, relative to Arth?"

"A trifle over ten diams distant, forty-two degrees south of the ecliptic at an acceleration of point three-five," replied the Navigator promptly.

"Good. Strike a curve to ninety degrees south and decelerate. We may want to land."

For several minutes Therol pored over the visor.**

It was midwinter at Arth's south pole, and at first the screen showed only as a square of eddying, gray-white desolation. Wind devils of sleet and snow obscured the surface. But presently a lull came and Therol was able to make out the irregular line of a stone wall built on a rocky, barren knoll. In the lee of the wall laid an overturned sled and its wooden runners were worn smooth and shiny by unmistakably recent use!

Therol shifted the view and scanned the hundred-foot length of wall. It dwindled to nothing at one end, but at the other, it abutted a low escarpment where the knoll ended at the foot of a towering mountain. Opening into the mountain-side where the wall joined the escarpment at a sharp angle, was what appeared to be a large doorway, closed over by a panel of heavy, wooden slabs!

"By Jove, Elta!" exclaimed Therol. "I'll give you odds of two to one that we find somebody living in that cave!"

"Nothing doing, young fellow," grinned Elta. "Your bets are usually cinches. And besides, I know what you are thinking. In the immediate vicinity of the poles, Arth's magnetic force probably was strong enough to counteract the omega-ray, and that 'most tenacious human life' you referred to awhile ago may have been living at the south pole during the ray bombardment."

"Good girl; that's sound reasoning," approved Therol. "And in all probability we will find the cave occupied by descendants of 'that tenacious life.'"

Had he suddenly glanced in her direction, Therol might have surprised the look of yearning that burned in Elta's eyes for an instant, and the flush of pleasure that mantled her unusually pretty face at his praise. Almost everyone on the ship knew of Elta's silent devotion to Therol, but he, like most men since time immemorial, had always taken her quite matter-of-course, searching afar for the very star that blinded him with its close radiance. Elta had recovered her poise by the time he took his eyes from the screen and continued:

*Probably Chicago.

**In behalf of those who may not be familiar with the delta-ray, it is composed of two extremely tight cathode beams from which its name was derived. On the Diana, the projector for one beam was situated at the bow and the other at the stern, thus providing the widest possible angle. Being mutually attractive in character, where these two invisible beams come in contact a whirl of light sensitive energy is created. The result is obvious. Light impulses picked up at the beam intersection are carried by the delta ray back to a receiver, where they are filtered out and amplified as desired.

"At any rate, we'll soon see."

CHAPTER II

Rumblings of Intrigue!

SHUNTING a penetrating gamma beam into the delta-ray circuit, he slowly lengthened the focus, and the scene on the screen moved forward; toward the door and through it; on down a long, dark passage and out into an immense, dimly lighted cavern.

Gigantic, grotesque stalactites, gleaming with pale phosphorescence, hung from the lofty ceiling and furnished the dim light. A forest of stalagmites covered all the floor except a gently sloping area that led to a small pool. On the brink of the pool huddled three skin shelters and before one of these a peat fire burned in a stone grate.

Slowly, the ray advanced. The cavern seemed to be unoccupied. No, wait! Crouched in the entrance to the tent before the fire, her head bowed upon her knee in a posture of dejection, was the figure of a woman clothed in a clumsy robe of sealskin. She raised her head and stared out across the pool. That she was very young, not over nineteen or twenty, was readily apparent, as also was her sorrow. Her eyes were red and swollen from weeping.

Several hours later, the *Diana* had landed, taken aboard the girl Therol had found in the cavern, and resumed her interrupted journey.

Therol paced restlessly up and down the room while Elta busied herself with her instruments. Once more clear of the atmosphere and well established on her course, the navigator checked her figures and turned the ship over to the pilot room.

"I've an idea we found her none too soon, Therol," she finally broached the subject uppermost in the minds of both. "I'm firmly convinced that the poor child had already decided to end her own life."

Therol flung himself down beside the speaker, on the luxurious divan beneath a row of ports in the outer wall. "But hang it all, Elta," he complained, frowning at the low ceiling, "what are we going to do with her?"

"Why, make a full-fledged Uplander out of her, of course. She's young and adaptable, and if you wish, I'll take charge of her; see to her education and training for some useful position."

"You're a jewel to volunteer for the job, my dear, but unless I am badly mistaken, it will prove to be no easy one. To begin with, she is of the Old Race; subject to its inhibitions and prejudices. And she is very attractive. Therefore, she is certain to find a lover among our young men, and when that happens . . . Because of her race, the Eugenics Board will never grant her the right to motherhood . . ."

"Oh, well, let's cross those bridges when we reach them." Characteristically, Elta dismissed future complications with a cheerful flourish. "And remember, her ancestry was isolated from the world for several generations. She may be unspoiled; amenable to training."

"At any rate, let's hope so." But Therol was plainly dubious. The great experiment of the Patriune had conclusively proven that heredity is not easy to conquer; that it takes many generations of watchful care to breed out and completely obliterate undesirable tendencies of the human character.

Shortly afterward, the subject of the foregoing discussion was ushered into the navigating room by Carmin, the little lookout, who had volunteered to share her room and wardrobe with the forlorn stranger.

That Chlo Andreas was beautiful could not be denied, even when judged by the rigid standards of the Uplanders. The ease and unconscious grace of her carriage denoted inherent physical coördination and development. Her vivid beauty was typical of the race of ancient Franz,* from which she sprang.

Lustrous, blue-black hair was pulled tightly back from her pale, oval face, and hung over one shoulder in a long braid. Her wistful, deep-brown eyes were a little timid, although they no longer filled with tears and she had begun to take a shy interest in the awe-inspiring strangeness of her new surroundings. A hot bath and a delicious meal had helped, too, although in the unaccustomed scantiness of Carmin's newest and most cherished uniform, she felt distinctly uncomfortable under Therol's appraising scrutiny.

Therol unobtrusively busied himself with the monochord machine. For the next hour or so, the little stranger's every word would be faithfully recorded for future analysis, and more satisfactory results would be obtained if this was done without her knowledge. When he had the machine adjusted to his satisfaction, he turned to the divan and found the girl entirely at ease, actually smiling at something Elta had said.

Leave that to Elta; no situation was too delicate for her to manage. Under her peerless guidance, the conversation shifted by imperceptible degrees into a definite channel. Bit by bit, Chlo's story came out, and arranged in proper sequence, it summed up as follows:

More than a hundred years previously, her grandfather several times removed, Captain Michael Andreas, had led an expedition into the wilds of Antarctica. In addition to the crew, the large airship had carried a number of prominent men and their families. All went well until they had flown over the pole, circled and headed back toward Little America, when they ran into a terrific storm. The ship was helplessly caught up in a blinding maelstrom that tossed her about for a while, then crashed her down upon the ice. No lives were lost, but the ship was wrecked beyond repair. Even the wireless was demolished.

The expedition had been well provisioned, and its members were not seriously alarmed. Its sponsors, puzzled by its sudden silence, would promptly send out a rescue ship. But for some unknown reason, the relief ship was never sighted and the weeks lengthened into months. Before they realized it, savage winter was upon them and several people died from exposure before a permanent camp could be built from the materials of the wrecked airship.

YEARS passed and the little colony was still trapped behind the ice barrier. The most hardy adapted themselves to a diet composed mostly of fish, and in spite of their malevolent environment, prospered, in a primitive sort of way. Books from the old ship's generous library were carefully preserved. A school had been established, and by the time of Chlo's father civilization had dimmed into a legendary, tribal memory.

Then came the awful snowslide; the devastating avalanche that had engulfed the whole village. Only Chlo's father, mother and two old women had escaped.

After days of hopeless wandering, they had discovered the entrance to the cavern, uncovered by a favorable wind. By dint of much labor, handicapped by lack of tools, her father had built the door and the snow wall before he died. Chlo had been born in the cavern and knew nothing of the world outside the small area surrounding it other than what she learned from the few precious books salvaged from the snowslide. She could

*France.

not remember her father; he had died while she was still a baby.

Left alone with a small child to support, the terrible hardships of the three women can be imagined. Had they ever known the softer comforts of civilization, it is extremely doubtful that they could have survived. But they were inured to the bitter lash of the wind; the fish and seal-meat diet; the long, shivery nights huddled over a tiny fire. And somehow, during the eternal struggle for existence, Chlo had received rudimentary instruction in reading and writing, as well as the carefully cherished little graces so closely identified with her race. All had gone fairly well until the death of the two older women, but the year of increased loneliness that followed undermined her mother's reason, and—

"—and yesterday," sobbed Chlo in conclusion, "while I was away at the fish trap, she wandered out into the snow. This morning—I found—saw her body—at the bottom of an ice crevice—"

"There, dear," comforted Elta as she drew the weeping girl close. "Don't you cry; don't you worry. From now on you are going to be my very own little sister."

When Therol returned to the room a few minutes later, he found the two girls chatting as if they had known each other for years. The girl from Arth was sitting on her feet at one end of the divan, listening avidly to Elta's plans.

"—and when you have finished your general schooling," Elta was saying, "you shall choose your own field and train yourself for the position you prefer."

"Wonderful!" breathed Chlo. "I have read of the great cities. In one of my books is a picture of Paree. How often have I prayed that I could wake up some morning and find myself in one of those beautiful buildings! Is Juno as great a city as Paree?"

Elta smiled and threw a quick glance in Therol's direction. "Oh, much larger," she assured Chlo. "All Paree might have lived in our largest building—the Tribunal, and the population of Juno, not counting children below school age, is nearly fifty million."

Chlo stared with shining eyes. Fifty million people! More than ten times larger than the city of her dreams. And she was going to Juno!

"But when are we going to start," she asked, suddenly.

For a moment Elta looked puzzled, then burst out laughing. "We haven't stopped, child. Right now, we are traveling at a speed of—let's see—a little better than twelve miles per second, and are gradually getting faster all the time. It only seems that we have stopped moving because our acceleration has been reduced to just a little above normal gravity—only enough to counteract Arth's diminishing attraction as we draw away from her, keeping our weight normal."

While Chlo caught very little of the actual meaning of Elta's words, one thing was unmistakably clear. The ship was moving at unthinkable speed, and *away* from Arth. In answer to her frightened query, Elta led her around the end of the divan and pressed a button beneath one of the ports. Within multiple layers of glass, a steel shutter moved aside and revealed a scene of majestic splendor.

A million bright points of unwinking light, each of slightly different color and intensity, hung in a curtain of night so deeply black it seemed almost tangible. Viewed as a group, these tiny dots of light became a glowing cluster, apparently plastered to the surface of the port itself, and if any individual point was singled out, the effect was the same; it thrust its minute pencil of light from just outside. There was no standard of comparison in space; no diffraction and diffusion, hence no perception of distance.

"They are stars?" Chlo only half comprehended.

ELTA closed the shutter. She had forgotten that space and its myriad contents would have little or no meaning for Chlo. How could the situation be explained to her?

Therol came to the rescue and drew a large chart of he solar system, explaining in detail the movements of the planets around the sun. He drew a line from Arth to a point slightly in advance of Vena and explained that by the time the *Diana* had completed the course indicated by the line, Vena would be there to meet them.

Then he turned to the delta-ray. First he showed the girl a projection of Arth, a brightly glowing, emerald globe that filled half the screen. The continents of Urop and Asha* were plainly discernible, and following a whimsical impulse, Therol made a number of delicate adjustments at the visor and flashed another view onto the screen.

"Paree!" exclaimed Chlo excitedly. "Just like the picture in my book."

Therol smiled and made another adjustment. This time, the screen held a ball of light so bright it hurt the eyes, even though it had been filtered through a heavy black lens and was scarcely a foot in diameter. Its surface was a seething furnace of free energy and great tongues of living flame lashed out from the periphery only to settle slowly back.

"Helios, the sun," expounded Therol. "And see the tiny, golden globe a little to the left? That is Vena; our destination."

Chlo had gone away with Carmin, who was to supervise the first steps of her education. Therol and Elta, having just finished what by way of convenience they termed their evening meal, sat in the *Diana's* luxurious lounge and watched with languid interest a group of young people dancing to the strains of low music in the salon just beyond. Later, perhaps, they would join the dancers, but now they were content to sit and talk, their conversation drifting easily from one point of interest to another.

Elta lolled back in the richly upholstered chair and stretched her shapely legs out before her with an air of almost sensual pleasure. Digging her heels into the deep texture of the rug, she slipped her feet out of their sandals and blissfully wriggled her toes.

"I simply didn't have the heart to tell Chlo that her wonderful Paree, along with all the others of Arth, is only a ghost city," she remarked, languidly.

"Perhaps it is better that you didn't," replied Therol. "Such knowledge at present would only upset her without accomplishing anything. Let her first live for awhile in one of the Summits. Let her get more familiar with our ideals. Let her study our philosophy, then who knows; perhaps she will make a good and useful citizen." And as an afterthought, almost irrelevantly, Therol said: "She is a pretty little thing."

"Oh, undoubtedly," agreed Elta. Then, with a malicious twinkle in her grey eyes: "But if you don't want to see Nisha's claws, don't make the mistake of telling *her* how attractive you think *any other* woman is."

Therol turned the full battery of his piercing blue eyes upon his navigator. "Just what have you got against Nisha?" he asked, after a moment.

"Am I compelled to like her, simply because she is a Councillor?" countered Elta, somewhat evasively. She knew, even if Therol didn't, that only Nisha Pandor stood between herself and the fulfilment of all her dreams. What wouldn't she give for Nisha's place in Therol's

*Known to the ancients as Europe and Asia.

thoughts! But no sign of all this showed on her face, however, as she listened with an amused smile to her companion's quick defense of the stately Nisha.

"If she hadn't been rated as one of the three most intelligent people in the Uplands, she wouldn't be on the Council. She has a very winning personality, and even you must admit that she is beautiful. But I know you better than that, Elta. You don't take a dislike to people without a reason. Come; what's on your mind?"

"She is too aloof; calculating," stated Elta, shortly, eying her chief speculatively, as if weighing something in her mind. After an interval she continued, and the low earnestness of her voice was at marked variance from her usual carefree, almost flippant manner.

"All right, Therol, I can't prove it, but you asked for it, and at the risk of having you think me guilty of malicious slander, I'm going to tell you just what I think. There is some sort of strange alliance between your two assistants. Twice, recently, I have surprised Jaddo and Nisha in furtive consultation in the Hall of Light. Each time, the tone of their voices abruptly changed when they noticed my approach. I am convinced that they are planning something—something they know you would not approve of . . ."

For a long while Therol stared gravely at the opposite wall before replying.

"I know that Jaddo is peculiar in many ways, and I have found occasion to censure some of his methods, but he is an exceptionally brilliant scientist. And as for Nisha—Elta, I cannot conceive of either of them conspiring . . ."

And he dismissed Elta's premonitions as groundless. Not many days passed, however, until he had grievous cause to recall them, and to wish that he had given them more consideration.

CHAPTER III

Figures in The Dark

PRECISELY on schedule, the Diana slid through Vena's upper atmosphere and settled gently down to the roof of the Tribunal. Standing beside an open port, Chlo gazed spellbound at the spreading panorama of a scene of unsurpassed beauty.

A great cluster of mountain peaks thrust their heads above a shimmering ocean of white mist; a mist that reflected the rays of a slanting, red sun, and which, level and unbroken, surrounded the peaks in a motionless expanse extending as far as the eye could reach.

The entire city was built upon the summits of these peaks. The buildings themselves were colossal; superb creations of fairy splendor, snatched from some ethereal paradise and refashioned by a giant's hand into structures of almost inconceivable proportions and beauty of design. Chlo counted twenty-seven peaks of varying size and height, and each peak was crowned by a single building; a mammoth pile of softly tinted masonry and glistening *crysteel*. The general design was the same throughout: geometric heaps of terraced masonry, pyramided to a flat-roofed apex. However, no two of them were identical, either in size or arrangement. Some were true pyramids, others were conical, while a great many were exceedingly intricate polyhedrons. Graceful balconies, arched casements and a wealth of slender spires and towers broke the step-like monotony of the terraces, where flowering gardens created a riot of perfumed brilliance.

Only the Tribunal was different. Surmounting the highest peak in the center of the cluster, it was a plain cube. Its proportions were gigantic, and Chlo later learned that it was indeed the very heart of the city. It housed the power plant; the atomic turbines and generators. It was the home of Eugenics; the Maturnator Units and Nursery. It held the schools of all scientific impedimenta. It contained the offices of the Directorate and the Council of Three. Just below the level of the fog, huge tubes, the arteries of commerce, led from the base of the Tribunal to span the dank, dripping abysses between peaks, connecting the Summits into one great city.

In a daze of wonder, Chlo clung to Carmin, who followed Therol and Elta as they filed out of the *Diana* and through the arched entrance to a low, domed penthouse on the roof of the building.

A waiting elevator carried them down a short distance, where they stepped out into a softly lighted corridor which led into a circular anteroom. A small group of unmistakably high-ranking officials awaited them in this room, but during the bewildered round of greetings only one person made a lasting impression upon Chlo's mind.

The man called Jaddo Fayne gave her first a casual glance, then a more lengthy scrutiny, and from time to time during the next few minutes, she felt the almost physical impact of his bold, dark gaze. In answer to her low-voiced query, Carmin told her that he was a Councillor, A-2, ranking in authority next to Therol.

Involuntarily, the girl from Arth compared these two leaders of a strange, new civilization. They were almost of a size; both superb in physical development. But Therol's fair coloring accentuated Jaddo's almost sinister darkness. And there was something in the latter's predatory, hawk-like features that strangely fascinated her; some quality in his nature akin to her own. Perhaps she instinctively sensed the bond between them; a bond of mutual attraction that he also seemed to feel, although he did not recognize it immediately. It was the call of kind to kind, for Jaddo Fayne was an atavist—a clever, scheming throwback to the age of ceaseless conflict; to the age when selfish, cruel cunning was a necessary part of man's equipment.

Something Jaddo said caused Therol to stiffen and exclaim in a shocked, puzzled voice:

"Nisha with us? Of course not, man—what do you mean?"

Recognizing something unusual in the attitude of the Councillors, the gaily chattering group in the room suddenly became still and Jaddo's reply, although uttered in a low tone, was plainly audible to all.

"She has not been seen since the day you took off for Arth, and while the city at large knows nothing of her absence, most of the Directorate agreed with me that at the last moment, she probably had taken a capricious notion to go with the *Diana*."

"But she didn't." Therol was plainly at a loss; worried. "If she was aboard the *Diana*, she remained hidden. And why should Nisha hide?" Then, huskily: "You searched the Lowlands?"

"With the delta-ray, yes," replied Jaddo. "Although I knew it would be useless. Nisha wouldn't be fool enough to venture beyond the lower terraces."

"I think, Jaddo," stated Therol in a level tone that carried no hint of the emotion burning within, "I think you should have notified the Legation at each Summit, immediately. We must do so, at once."

AND he led the way into a smaller, adjoining room which contained only an instrument board and three rows of low-backed benches facing what appeared to be a blank wall. Therol sat down at the board, and those of the sober group who followed, dropped quietly to the benches. Not knowing what to expect, Chlo was startled

when the lights went out, but the room was immediately suffused by a pale luminosity from the wall—undoubtedly a projection screen of some sort. One after another, twenty-seven panels flared to life and twenty-seven faces looked out from the screen.

When the last panel held its attentive Governor, Therol greeted them with a formal salutation, and then in an easy, conversational voice, explained the situation:

"As all of you probably know by now, the *Diana* has just returned from Arth. Our mission there was satisfactorily accomplished and Thal has started construction of the new city. Our original plans shall be carried out. In less than a year, sufficient ships will be finished to transport to Arth the first unit of a million people.

"In the meantime, Councillor Nisha Pandor, A-3, has been missing since the day the *Diana* left on her expedition. As she did not accompany us, some terrible accident must have befallen her. It must be that, for the only alternative would be foul play, which could only mean that there is a criminal among us; a thing I shall refuse to believe until it is proven.

"We all know that criminal tendencies are largely the product of a particular combination of heredity and environment. Our ancestors conquered environment and we are fast conquering heredity. For many years; in fact, not within the memory of any of us living today, has there been an instance of criminal violence among our people. However, it behooves us to be on the alert for the occasional atavistic characters that are sure to appear during the next several generations.

"Bearing all these things in mind, I still cannot bring myself to believe that our missing Councillor met with violence. It is more likely that she is lost somewhere in the Lowlands, and I hereby charge each of you to have your Legations make a diligent search in the vicinity of your respective Summits. Report to me personally any findings you may make. That is all."

* * * *

Chlo stood in the small, but sumptuous room on Terrace Three, Summit Five, and looked about her with shining eyes. Carmin had told her that the room was to be her very own. She felt of the soft texture of the draperies covering the bed. She tried the water faucets in the ingeniously appointed bath. She manipulated the light switches and projected a thrilling monochord amusement reel onto the tiny delta-ray screen. What an undreamed of paradise it all seemed to the little girl from Arth, accustomed to a world of eternal ice and snow, with only the scant, barren comforts afforded by her polar cavern!

She never forgot her first meal in Juno. From Carmin's casual mention of "D-Fifteen," she had formed a mental picture of a long, long hall with numerous tables capable of serving perhaps hundreds of people. No impression could have been further amiss, as she discovered when she followed Carmin into a small, circular room that was finished entirely in glittering crystal, and which contained only one round table holding no more than twenty places.

One puzzling surprise followed the other in such rapid sequence that Chlo's head was in a whirl and she scarcely heard the gay banter of the other girls seated around the table. In fact, she barely managed to absorb from Carmin sufficient guidance to get through the meal.

Strange customs! The center of the table was raised, platform-like, and it slowly revolved! When a certain segment passed in front of one, if its plainly labeled contents were desired, all one had to do was press a large button conveniently embedded in the table's rim near one's elbow, and presto! the item so selected popped out, and all one had to do was pick it up! But none of the names on the strange menu were familiar to Chlo, and noting her perplexity Carmin laughingly selected and arranged her meal for her, before selecting her own.

The various sized, odd shaped containers in themselves were a revelation to Chlo. They were hermetically sealed, seemingly cast in one piece from a porcelain-like material hard as adamant. But miracle of miracles! A point of arcing, purple fire on a little instrument no larger than a pencil, sliced through the containers like butter, and each container served as its own dish, holding the implement necessary for its consumption; a porcelain tube for liquids, or a porcelain spoon for the more solid foods. No knives were required, as the food was fully prepared in advance.

ALL the foods were strange to Chlo—different even from the more concentrated forms used aboard the *Diana*. Carmin explained that while most of them were synthetic—manufactured from various solids by rearranging their atomic structure—certain very necessary carbohydrates were still produced by Nature, and were grown on the agricultural terraces.

"But who does all the cooking and dish washing?" Chlo wanted to know.

"Dish washing?" Carmin was puzzled for a moment, then with a smile: "You mean the food containers? They are not washed. If you have finished, I will show you what we do with them. First, we stack them in a little pile right here. Then we press this little button and they are gone, down a pneumatic tube and back to the Food Laboratory, where they are melted down and recast for future use."

"But who keeps the table clean?" Chlo next wanted to know.

"Simple," replied Carmin. "After each meal, the table is automatically exposed for a fraction of a second to a comparatively weak K-beam to which the metal of the table is impervious, but which is sufficiently strong to burn up and consume all refuse and completely sterilize everything it touches."

Chlo cast a timorous glance at the small, blue bulb hanging pendent from the ceiling directly over the table, but Carmin assured her that the vigilant eye of a photocell made it impossible for the K-beam to be turned on as long as anyone was near the table.

"Time for Group Twelve," remarked Carmin as she arose and with Chlo at her heels, followed the other girls out into the corridor. "We are assigned to Group Eleven. There are twelve groups in the unmarried women's dormitory section of this Terrace, and we are all served our meals in D-Fifteen."

"But who does all the cooking?" Chlo insisted, as she followed Carmin down the hall, through an open portal and out upon the flowering terrace.

"Cooking is like everything else," began Carmin, stopping under an arched bower of mimosa. "All essential avocations are highly specialized. For instance, if you chose the preparation of foods as your profession, your general education would include an exhaustive study of that subject. Your training completed, you would be assigned to one of the food laboratories, where you would begin as an apprentice. Then, at the examinations, if you had continued to study, you would be promoted to the next higher position, and so on."

The two girls stood arm in arm on the terrace and watched the red-hot ball of Helios slowly quench his fire in the close-hanging mists of the far horizon. Everything was odd; unreal to the girl from Arth. Even the apparent motion of the sun was strange. As Therol had previously explained to her, Vena had her north pole

pointed almost directly toward Helios. Juno was situated just north of the equator, and the slight polar deflection was just sufficient to create for the city a night of deep, gloomy twilight, and a day of mellow, red sunlight, when the sun's fierce rays struck Vena's perpetually fog-covered surface at a pronounced slant, even at midday.

The day and night cycle was thirty hours long, and there were no yearly seasons. Carmin said that the fog had never been known to vary. It seemed always to hang in a thick, smoky blanket above the dismal, dripping abysses of the Lowlands. Only the Summits of Juno, in all the dreary world of Vena, extended above the mists, and into the slanted, golden rays of a huge, life-giving sun.

"Does anything live in the Lowlands?" queried Chlo.

Carmin shuddered. "Yes. Creepy, slimy Things that are absolutely colorless. Horrid Things that wither away and die when exposed to light. They are—indescribable—I will show you some of them on the delta-ray tomorrow."

Helios had set and the deep, velvety twilight surrounded them. As Chlo listened dreamily to Carmin's monologue, she gradually became aware of a sweetish odor, faint and strange, but altogether pleasant. It seemed to float in out of the gathering dusk. It was delicious and she inhaled deeply. A drowsiness stole over her. What *could* have made her so sleepy all of a sudden? She glanced toward Carmin and tried to cry out, but her strength was gone. Carmin, like herself, was wavering, groping . . . falling . . . into the arms of dark-clad figures. Falling into oblivion . . .

CHAPTER IV

The Story Therol Told

THEROL stooped over a table and put the finishing touches to a mechanism with which he had been experimenting for three days, without sleep and almost without food. Elta had been with him most of the time; had helped him with the more intricate calculations. Now that the machine was finished, he looked around for her before testing it out. She was not in the laboratory, and he recalled that she had left earlier in the day. He couldn't remember just where she had said she was going, or when she would return, and he couldn't wait long—

The delta-ray gong sounded his signal and he automatically reached for the switch. Immediately, Elta's face, pale and strained, framed itself on the screen and her excited voice issued from the throat of the concealed speaker:

"Therol—quickly! I may be discovered any moment and every second must count, so listen closely. You remember the spherical interference field we located on the delta-ray the morning after Carmin and Chlo disappeared?—the interference that started us experimenting on the gamma-reflex? Well, this morning while you were determining the length of the interfering wave, I got a misguided hunch to fly over the zone to see what I could see. Whoever is behind it all is smarter than I thought, for I was seen and my flyer paralyzed just as I passed over.

"I was forced down into the Lowlands just a few hundred yards beyond—close enough for my delta-ray to pierce the interference, and I see the—yes, there's no possibility of an error—it's the *Diana*, and men all dressed in black, are rushing about, evidently getting ready for a take-off. Ah! there's Carmin and Chlo, being taken aboard under guard. The crew are all—hurry, Therol! Help me if you can! A small flyer has slipped up and a gang of men with L-rays are coming toward me . . . Therol! It's just as I thought! The leader is . . ."

Elta's voice faded away, and after a few frantic adjustments at the delta-ray panel, Therol gave it up and rushed over to the new gamma-reflex machine. It had to work now! He simply must see what was going on beyond that mysterious barrier around on the other side of the planet.

Setting the dials, Therol snapped a switch and peered intently at the miniature screen. Manipulating a small variable rheostat, he ran through the scale in which he had calculated the interference to occur without results. Slowly and carefully, he ran it again, then in desperation cut in an additional resistor.

This time he was rewarded by a hazy, distorted view of the *Diana*. Hastily adjusting the dials to the new reading, he cleared up the image only to see the *Diana* rise from the soggy ground, then suddenly disappear altogether. Therol thought furiously for a moment, after which he reached for the switch to the regular delta-ray projector. Correct!

The interference field had melted away and the delta-ray screen depicted the *Diana* gathering momentum with each passing second on a course that pointed straight toward Arth!

Helplessly, Therol sat and watched the stolen ship draw farther and farther away, carrying with it Carmin, Chlo and—yes, he knew it now—the woman who meant more to him than anything else in the world! Even Nisha faded into the background. Only one fact stood paramount in his mind: Elta was aboard that ship—a captive; possibly in danger of her life! In a blaze of revelation during that hopeless moment, Therol realized that he had always loved the vivacious little mathematician. And now she was gone—snatched from him by no telling what sort of vicious crew.

Who could be at the bottom of the kidnapping of the girls and the stealing of the *Diana?* For perhaps the hundredth time during the past three days, Therol revolved the question in his mind without coming anywhere near a satisfactory conclusion. Perhaps Jaddo had returned by now, and could suggest something.

REACHING for the building communications dial, Therol set up Jaddo's personal call number and pressed the signal key. Mathis, the Councillor's first assistant, answered and reported that his superior was still absent. Mechanically, Therol thanked the man and broke the connection.

Then something clicked in his brain. A great light was beginning to shed its rays upon the mysterious situation. Berating himself for a blind fool, he recalled Elta's words of misgiving on the *Diana* a few days previously. He saw it all, now. Jaddo Fayne and Nisha Pandor evidently *had* been planning something. And he knew what it was. They were scheming to sacrifice the carefully laid plans of an entire nation upon the altar of personal selfishness. They—at least Jaddo—intended to surprise and overpower Thal and take possession of Arth!

After carefully analyzing the situation, Therol relaxed and a feeling of confidence flowed like wine through his veins. Jaddo was clever and cunning, but he had overlooked a very important factor; the mind values involved. Therol did not doubt for a moment that in the end he would outwit the renegade, for the very fact that Jaddo harbored atavistic inclinations was proof of an inferior twist in the man's mind, placing it below the standard of the average Uplander, in spite of its superficial brilliance.

Therol promptly proved these conclusions. In that moment, he concentrated his powerful intellect and

reached out across space to the fleeing *Diana*. Elta's mind he found serenely sealed, but the mind of the apostate was an open book to him and what he read therein both surprised and saddened him. He was right.

Jaddo and Nisha were plotting the conquest of Arth!

Strange things Therol saw in that brief interval during which he sat in a grim trance of half-death while the thought pictures of the renegade flashed in jumbled procession before his closed eyes. And perhaps the most surprising thing of all was the fact that Jaddo actually felt justified; really believed he had a free-born right to do what he was planning.

For a short time following the unaccustomed mental excursion, Therol was exceedingly depressed. The strain of such effort was tiring, and added to this was a very human feeling of regret and disappointment at finding his brilliant associate, through some hereditary quirk of the mind, slipping back to the savage, elemental outlook of hundreds of years ago.

Already, the red haze of unreasoning passion clouded the clear logic so much a part of the true Uplander. Already, the lash of the primitive beast was driving Jaddo to think of things that his fast warping intellect cunningly clothed in a fleece of righteousness; fabricating plans so cleverly designed that Therol found that he must move with extreme care to frustrate them.

For a long while Therol sat perfectly motionless, his every thought centered upon a solution of the problem. At last one crystallized, and after giving it very careful consideration, he promptly set to work upon its execution. First, he sounded general attention and called a meeting of the Directorate.

In those days, the Directorate was made up of the Governors of the twenty-seven summits of the city. In less than half an hour, the Directorate was seated in a semicircle before the massive desk in the Council Chamber, and the meeting had been called to order. Therol arose and addressed not only the Directorate, but also the delta-ray pickup unit suspended in the center of the room.

"Citizens, this is the first general assembly to be held in Juno for nearly two generations, but I believe that the facts I am about to set forth should be known to every man and woman in the city. As you no doubt have already noted, Councillors Fayne and Pandor are not present at this meeting. As we know, Nisha Pandor disappeared several days ago; now Jaddo has deserted us and it is with deepest shame that I must detail the disloyalty of these two. They are plotting against the very foundations of our civilization—something that has never before happened in the history of our race.

"The mind of Jaddo Fayne has slipped backward nearly four centuries, and—but to make more clear the nature of the crisis we are facing, I will start back at the founding of our city and sketch briefly the events bearing upon the present situation.

"NEARLY four centuries ago, there lived on Arth, three scientists who conceived a wonderful plan. We all know who these men were: Antrim, my own forefather, Garth and Hather; the Patriune to whom we owe our city and our existence as a race.

"These three men were centuries in advance of their time. Arth was indebted to them for many of her last great achievements. But they made many more discoveries which they kept to themselves, fearful of entrusting them to the constantly warring nations that made up the Arth of their day. Among these latter inventions was the delta-ray, which with improvements we still use, and the G-ray, which makes space navigation possible—a feat long believed by the ancients to be impracticable.

"And then to the Patriune came the Great Inspiration.

"They recruited a small following of intelligent people who were in sympathy with their ideals. A space ship was built in strictest secrecy, and the intrepid little band of pioneers set forth to find for themselves a world where they could build a civilization free from the scourge of mass hypocrisy and individual avarice. First, they visited the planet known as Marce,* but found it to possess too little water and oxygen. Next, they came to Vena, where they found on the summits above the fog line, conditions almost exactly duplicating those on Arth. Here, on this very summit, they established the new colony and erected the first buildings.

"During the first ten years, the space ship made innumerable trips to and from Arth after essential supplies. These trips were never known to the world at large, but nevertheless, the original colony was augmented from time to time by carefully chosen volunteers. Soon, the new city of Juno had grown to some ten thousand souls, and under the scientific methods of the Patriune, became entirely self-supporting. At a great celebration, Arth was bidden a last farewell and the space ship destroyed. From that day to this, knowledge of space navigation and the secret of the G-ray has been confined to citizens of grade-A classification.

"Since that day we have made wonderful progress, thanks to the foundation laid by the Patriune. As all of us know, Hather, a biologist of the highest order, gave to our ancestors before he died, the Maturnator; perhaps the greatest asset we have had in our efforts at selective race building. To conquer heredity has not been an easy task. We have had reverses, naturally, and not all of them have been recorded in history. It is of one such case that I am about to tell you.

"It so happened that Jaddo Fayne's great-grandfather, Mikel, who served for a time on the Council as A-1, also had an atavistic twist in his mind. Foreseeing that in time Juno was destined either to become overcrowded or else be forced to maintain a fixed birth rate, he suggested what to him seemed a more desirable alternative. Hather, a descendant of the first Hather, and a man named Shaun, were Mikel's associates on the Council.

"Mikel's plan was to place a powerful omega-ray machine upon Luna, Arth's satellite, train the ray upon Arth, thereby putting a stop to the reproduction of all animal life. Then, when with the passage of time all its inhabitants had died of old age, the most beautiful planet in the universe would be at our disposal. While it is true that there are strong arguments for both sides of this question, I believe the concensus of opinion will be that Hather and Shaun were right in withholding their support and in vetoing the proposal altogether.

"BUT Mikel evidently became obsessed with his idea, for when the other two Councillors refused their sanction, he resorted to cunning and carried it out secretly. When he requisitioned for certain machine parts and castings, although 'Mechanics' had no idea of the purpose for which they had been designed, because of his high position, the orders were filled without question. Equipping his personal flyer with a G-ray generator, thereby converting it into a space ship, he carried away, piece by piece, these mechanical parts as fast as they were completed. How he did this, and how he managed to assemble the finished machine, was never known. Perhaps he had a small crew sworn to secrecy on some pretext or other, or he may have worked entirely alone.

"However that may be, Hather chanced to be scanning the heavens one day with an electroscope and saw Mikel's

*Mars.

flyer returning home from somewhere out in space. A few days later he saw the same thing, and his suspicions were aroused. Recalling the scheme Mikel had proposed, Hather at once guessed the nature of the former's unauthorized trips into space. After a hasty conference with Shaun, a flyer was equipped with a G-ray and when the mad Councillor again left Juno, Hather and Shaun were following him as closely as they dared.

"Only an hour behind him and between his ship and the sun, Hather saw Mikel suddenly veer from his course toward Arth and dodge behind Luna, verifying his fears. The pursuing ship was forced to the limit of its speed in an attempt to overhaul Fayne before he landed and lost himself among the numberless craters and fissures that make up Luna's jagged surface.

"But they were too late. By the time they had reached that portion of Luna which perpetually faces Arth, Fayne and his ship had disappeared. Methodically, they scoured Luna's scarred face with a delta-ray. The lighted portions they could search easily enough, but the impenetrable blackness of the airless shadows cast by crater walls, they could not pierce; and unless Mikel carelessly betrayed himself by the incautious use of his lights, they might have looked forever without finding him in that labyrinthine maze of vivid light and utter darkness. For days they searched in vain. The mad Councillor was never seen again. He may have fallen into one of the bottomless crevices which cleave Luna's barren desolation like the slashes of a gigantic knife, or, who knows? He may have slipped away to lose himself in the depths of space . . .

"But the damage was already done. After returning home for the necessary instruments, Hather and Shaun finally located the ray machine concealed in a deep crater. It was operating at maximum power, and from the fuel gauge they estimated that its unwinking gaze had been trained upon Arth for many days. Animal life on Arth was doomed, for once exposed to the omega ray in those times, there was no escape, inasmuch as the alpha ray rejuvenator, you will recall, was only recently developed by myself.

"And that, my friends, is the inside story of what happened to the peoples of Arth," concluded Therol, gravely. "In a brief century, an entire race perished. The act of one man has perhaps made universal history, and what has been done cannot be undone. But let us make it our business to see that the Old Race has not been sacrificed in vain. Let us carry forward the ideals originated by the Patriune. Let us continue to fight the primordial instincts of the beast and finally stamp it out completely.

"Already, our life span is thrice that of our forefathers. There is no excuse for death. Let us follow the guidance of pure reason and build our race to the heights for which it is destined: perfection because of a complete understanding of the Laws of Life; immortal because it is imperfect to die; Godlike because the Figurehead of our worship is our own ultimate goal; masters of the Universe because we will have earned the right!"

CHAPTER V

The Men of Eos

A RINGING cheer greeted these last remarks, and for several minutes order was forgotten while discussion flew thick and fast. Therol closed his eyes and pictured the same excitement being enacted before each of the thousands of delta-ray units throughout the city as the populace argued; some for and some against Mikel Fayne's method of stopping, without physical violence, the meaningless existence of the Old Race. That question promised to be the topic of many a warm debate before it was finally settled to the satisfaction of all. Therol smiled as he raised his hand for silence.

"That brings us down to the present," he continued, as soon as order had been restored and he could make himself heard. "Although the populace at large did not know the cause thereof, it has long been common knowledge through delta-ray study, that animal life on Arth was rapidly becoming extinct. Members of the A-group knew that total extinction was inevitable. Therefore, plans were made to colonize Arth, and the *Diana* was built. Then I perfected the alpha-ray projector and proposed the rejuvenation of all survivors of the Old Race that could be found.

"Jaddo Fayne opposed me in this from the start. He argued that Arth had been practically delivered into our hands through no act of our own; why not take it, thankfully. I believe that was Jaddo's first atavistic thought; the thought which lead to others that were each in turn a little more clouded and reasonless, until now he has reached a point little above that of even the Old Race, of which he is so scornful.

"Nisha, on the other hand, was noncommittal on the subject. She would not cast the deciding vote and the situation was at a deadlock between Jaddo and myself. I was just at the point of submitting the problem to the Directorate, when Jaddo suddenly capitulated. Surprised but pleased, I halted our plans for colonization until after the *Diana* had returned from a tour of investigation. I took Thal and the builders with me on this trip because I more than half feared that no survivors of the Great Cessation would be found. This proved to be the case. The voyage of the *Diana* is now common history and everyone knows that the girl Chlo Andreas is the last living representative of the Old Race.

"And now we come to the purpose of this meeting:

"Jaddo Fayne has stolen the *Diana*, our only space ship. Somehow, he has seduced more than a score of the weaker minds among our people to man the ship and is now on his way to Arth, taking with him as prisoners, three of our women. He has gone amuck. Without any great amount of effort, I have read this man's mind, which fact within itself is significant.

"And, in his reverie I saw incredible things. I saw visions of conquest. I saw a stealthy attack upon Thal, who was left on Arth to build the power plant for our first city there. I saw the *Diana's* generators busily feeding energy into a new ray which converted the magnetic stratum surrounding Arth into a deadly barrier which nothing can pass. I saw the new power plant completed and a permanent magnetic ray projector installed. But listen closely, for here is the strangest of all the strange things I saw in this man's thoughts:

"Queer, frog-like creatures were occupying the new city, with Jaddo posing as their absolute master!"

If Therol's first narrative had caused a stir, this one created a turmoil. Everybody spoke at once. For several minutes, exclamations and conjectures filled the Council chamber with a hubbub quite unlike anything Therol had ever before witnessed. Finally, however, the excitement subsided sufficiently for him to resume.

"There would seem to be but one plausible explanation for the presence of these strange creatures in Jaddo's thoughts: in some manner, he has found and communicated with an intelligent form of life existing somewhere in the Universe—perhaps somewhere in this very system. I could not ascertain the origin of these people, but believe that Jaddo intends to convey them to Arth in the *Diana*. And he will reach Arth, my friends; we have no

way of stopping him, and once entrenched behind his magnetic barrier, he will be hard to dislodge."

"But what about Nisha Pandor?" someone asked.

"There is something in that connection which I cannot quite understand," replied Therol. "It would seem from Jaddo's thought pictures, that she is working with him; that she was a stowaway on the *Diana's* first voyage, I am now certain. Jaddo expects to meet her on Arth, but strangely, he dreads this meeting very much!"

"Why should this be so?"

"I cannot imagine. But one thing we do know. They not only have deserted us, but they have forsaken their honor as well, for, Citizens of Juno, Jaddo Fayne plans the ultimate conquest of our own race!"

THE heavy silence of utter consternation greeted these words, then the slow flame of righteous indignation kindled in the hearts of the assembled Directorate. Many plans were proposed and discarded before one was finally adopted. Hours later, following the formal classification of Elta and Thal to replace the two deposed Councillors, Therol outlined his plan of campaign and adjourned the meeting.

While in Juno, awaiting construction of the new space ship, *Entriss*, Therol had had ample time to search the heavens for the home planet of the odd beings he had seen pictured in Jaddo's mind. At last he had found it on this little fragment of a shattered world which he was now approaching with such tremendous speed. With increasing interest, he viewed the rapidly growing sphere showing dead ahead through the forward navigating port. It was Eos, largest of the planetoids, and in less than an hour, he would slice into its atmosphere. What his reception would be, he had no remotest idea, although from delta-ray study, he knew exactly what the place looked like at close range.

Radio communication, he had not even considered. Had he succeeded, by one slender chance in a million, in establishing such communication, Jaddo could easily have intercepted his messages and so learned of his plans. There had been nothing to do but await the building of the new cruiser, then make the long trip in person, consuming more precious time while visions of Elta at the mercy of the renegade, drew every fibre of Therol's body toward Arth.

He missed Elta terribly. The trip now so nearly over had been a constant reminder of the happy days they had spent together in the navigating room of the *Diana*. Not that Pladin, who was navigating the *Entriss* wasn't efficient. Far from it; Pladin was an excellent man in every respect. Furthermore, the new ship was manned throughout by the *Diana's* old crew. But somehow, Therol could find in no one else the same perfect, carefree companionship he had known with Elta. He could see now, that she had always loved him. What a blind fool he had been. He recalled with regret the many occasions in the past when he might have made sweet love to her; might have held her close, as he so longed to do now.

Suddenly the *Entriss* gave an almost imperceptible lurch. She had struck the first layer of Eos' atmospheric blanket, and as Therol took his place at the delta-ray controls, he forced from his mind the constantly recurring visions of his beloved. He must keep his head clear for the task before him; then, if successful, he could consider ways and means of rescuing her.

He had already located what he believed to be the capital city of Eos, and he unerringly set the *Entriss* down in a level basin less than a mile away. Pladin, who was to pilot the air flier, signified that all was in readiness.

"Don't forget your ray tube, Councillor," he cautioned, as Therol issued last moment instructions to Hamer, the Third officer, and picked up a small, black carrying case. "We do not know what the attitude of those creatures may be."

Assuring Pladin that he was fully prepared for any reasonable emergency, Therol led the way down the corridor to the room which served as a hangar for the flyer. The atmosphere of Eos had already been tested and found breathable, so without any fear on that score Therol pressed a lever which caused a section of the outer hull of the *Entriss* to swing downward upon hinges, forming a ramp, or landing platform for the flyer. The two men climbed into the little machine, Pladin eased it out onto the platform, threw in the gravity screens and the flyer shot straight up into the air for a hundred feet or so, where it poised for an instant before darting off in the direction of the city.

AS they flew along at a moderate pace, Therol peered over the end of a stubby wing and studied the terrain unrolling beneath them. Nowhere had he seen anything resembling a tree, and the only vegetation visible was a greenish-brown moss, tough and leathery looking. Probably had to be tough, he decided, to withstand the terrific extremes of temperature to which the little planet was periodically subjected. It was also very likely for this same reason that the inhabitants of Eos lived underground.

Eos, fragment of a demolished world, was scarcely more than five hundred miles in diameter, roughly cubical in shape, and its surface was an interminable network of deep ravines and steep, serrated ridges of a pale green stone having a high metallic content. Interspersed in this craggy wilderness was an occasional wide, winding valley holding scattered lakes of still, blue water. It was in such a valley just across a high ridge from where Therol had landed the *Entriss*, that the first signs of life were seen.

From a cleverly concealed tunnel mouth in the hillside above a large lake, issued one of the denizens of this barren world. And a more unusual being Therol had never seen. It stopped a little way from the tunnel and eyed the poised flyer, apparently frozen with astonishment. Like everything else about the planet except the skies and lakes, it was a dull green in color. Standing erect upon its short, hind legs, it was not over four feet tall and reminded Therol more than anything else, of a frog, although in many respects the comparison was not entirely accurate.

Unmistakable intelligence gleamed in the beady, unwinking eyes of this frog creature as it stepped slowly backward into the tunnel mouth where, like a flash, it turned and disappeared. Evidently, it went to summon others of its kind, for by the time the flyer had landed and Therol and Pladin, ray tubes drawn, had stepped from the machine to the moss-covered ground, fully a dozen of the frog men had congregated in the tunnel entrance.

Therol found that he could easily read the minds of these beings, but for several minutes their thought images showed nothing but surprise and elation, mixed with awe. They were either very low in the scale of evolution, or what was more likely, the woefully decadent remnant of a once higher civilization. Therol spared himself any foolish attempt at speech. Instead, he calmly sat down upon the ground to wait until the frog men overcame their timidity. Meanwhile, he kept his mind alert for any indication of unfriendliness, while Pladin sat a little behind him, his ray tube held at the ready.

Soon, one of the frog men, bolder than the rest, left the shelter of the tunnel and slowly advanced, his webbed, many-fingered right hand extended palm downward. As he came closer, Therol felt and barely heard, the vibra-

tion of a low-pitched purring. There was nothing but friendly awe in the fellow's mind, so Therol got to his feet, extending his own hand in duplication of the frog's greeting. Immediately, the purring sound changed quality and faded away entirely. Therol surmised that the frog people conversed in a tone of voice below the range of human audibility, for although he could see, almost feel the vibration of this fellow's throat, he couldn't hear a sound.

JUST then occurred an incident which firmly established in the minds of the frog people a deep and lasting respect for what to them appeared to be an exhibition of supernatural power. Without effort, and by merely pointing their arms, these tall visitors had slain a horde of the deadly beasts of Eos! This is what actually happened:

Just when Therol was wondering what to do next, the frog man who was approaching him, suddenly froze in his tracks, then without ceremony, turned and bolted back into the tunnel. Therol was perplexed until a dim shadow, cast by the far away sun, flashed over the ground before him and he glanced up. He saw the Thing barely in time to avoid the slashing beak and the grasping, down-curved talons of the most horrible creature he had ever seen or imagined.

Picture, if you can, the fat, black-furred body of a spider fully three feet in length, equipped with the barb tipped wings of a bat, and with each of its eight legs terminating in a pair of poisonous looking claws! That was what he saw, and as it sailed past he caught a fleeting glimpse of close-set, venomous red eyes that made his flesh crawl! Monstrosities! Loathsome hybrids which he later learned were the scourge of the planet!

With a speed that was amazing in a creature of its size, the Thing turned and dived back. Therol glanced around and saw that Pladin had his ray tube trained upon another of the monsters. Good Heavens! There were at least a dozen of them! With a shout for Pladin to follow, Therol jumped for the tunnel entrance, drawing his own ray tube as he ran. This temporary refuge was all they needed, for the death ray made short work of the monsters and in less than half a minute the last one fell with a sickening plop, not twenty feet from where they stood.

An hour later Therol squatted in the palace of the frog city, exchanging ideas with the chieftain, or king. The tunnel our friends had followed was nearly a mile in length and had extended downward at a fairly steep rate, finally opening into a natural cavern of vast proportions. The pale green luminosity of walls and countless ceiling stalactites evidenced the presence of highly radioactive substances and furnished the only source of light. Numerous side tunnels had been cut into the walls of the cavern; tunnels which lead to the homes of the frog people.

It was in the largest of these artificial side-caverns that Therol held his weird conversation with the king of the frog people. The black box which he had carried with him from the ship, contained the crude forerunner of our modern thought projector, which he had improvised for this very purpose.*

During this queer conversation, Therol learned many things. At some time or other, Jaddo had visited Eos in a small flyer, and although he had possessed no such efficient means of communication as Therol's thought projector, through diagrams, pictures and monochord reels, had managed to make himself fairly well understood. Evidently, Jaddo had discovered the people of Eos through the delta-ray and at once had seen a way to turn this knowledge to his own advantage.

He had painted for the frog people glowing pictures of Arth. In fact, he had shown them several monochord reels which he had filched from the files of the Hall of Light for that very purpose. Then he had promised them the freedom of this beautiful world in return for a portion of their personal services. To the denizens of barren little Eos, this was just like an offer of life in Heaven. The king had passed the word to the smaller, outlying cities, and two million frog people were even then awaiting Jaddo's promised return in the large space ship which was in time to transport them all to Arth.

Therol shook his head. It was just as he had thought. Jaddo was planning to betray these simple, half civilized people. Adjusting the thought projector he managed, after several vain attempts, to picture for the king what Jaddo had in mind. He pointed out that it would take the frog people a long time to adjust themselves to their new surroundings; that long before they had adapted themselves to Arth's immensely stronger gravity, Jaddo would have made them into virtual slaves, perhaps doomed for generations to labor long hours in mines, or at the tilling of Arth's fertile soil; that eventually they were to be led into battles of conquest, where vast numbers of them would be slain, while in exchange they would receive only the meagre necessities of life.

Even though the king at last seemed to understand, he was visibly perplexed. Probably he was trying to decide whether he should believe Jaddo's story, or Therol's. And this was the exact moment for which Therol had been waiting; the moment for which he had made the long trip to Eos. Before the king had had time to reach any sort of decision, Therol flashed upon the screen a series of images indicating that it would be better for Jaddo to return to Eos. Then, perhaps . . .

CHAPTER VI.

A New World

RECKONED in Arth time, two weeks had elapsed since Eos had been left behind, and the *Entria* hovered in space some two diameters away from Arth, occupying that extremely desirable position long known to flyers: between the enemy and the sun. Pladin was poring over the delta-ray visor, while Therol sat in front of the main control panel thinking of the two long months that had elapsed since Elta had left his laboratory in Juno to wander down into Vena's dripping Lowlands and get herself captured by Jaddo. Would his plan for breaking the renegade's magnetic screen be successful? He believed it would, but was a little fearful of the outcome, nevertheless. It was dangerous business, and whoever happened to be in the immediate vicinity of the new power-house on Arth, would be instantly killed. And he had no way of knowing where Elta was imprisoned. What if she—? The cold hand of premonition clutched him for a moment and small beads of moisture gathered on his brow at the thought.

Pladin, who had been studying Arth by delta-ray, suddenly looked up and spoke, excitement trembling in his voice:

"It won't be long, now, Councillor. I know the symptoms, and I would say that the *Diana* will take off within two hours, at most."

"Everything is ready," nodded Therol. "Keep your

*As everyone knows, the principle of the thought projector is very simple. Two highly conductive electrodes, when placed in contact with the temples, pick up the thought impulses and convey them to an electrical converter valve, where they are changed into electric energy, amplified and projected by delta-ray to a visual screen. Of course, only picture images formed in the mind can be projected. Words themselves have no meaning except when an image of the written or printed word is visualized. Therefore, we can readily understand why Therol never learned the names of any of the frog people.

eye glued to that visor and let me know the instant the *Diana* leaves the ground."

Pladin again bent over the visor and the minutes stretched themselves into hours with interminable slowness. After sounding general attention throughout the ship, Therol found himself with absolutely nothing to do, and to keep himself from thinking too much about the outcome of the impending attack, he very painstakingly counted the measured revolutions of the little red balance wheel in the bottom of the chronometer. After what seemed an eternity of silent waiting, he saw Pladin raise a tense face from the visor and nod, without a word.

Now was the time! Within the next few seconds Jaddo would be forced to lower his protective barrier to let the *Diana* through. Therol knew that he must strike during this brief interlude, or else be forced to wait perhaps for many weeks for another opportunity. He had not been able to calculate a nullification for this new ray of Jaddo's. It had proven absolutely impervious to everything he had tried. Even the delta-ray would not penetrate it, and they had been forced to strike a focus at the edge of the barrier and use lens magnification over the visor.

Outwardly calm, although his face was only a grim mask, Therol lifted a steady hand and shoved down a small, bright lever at one edge of the control board. Pladin, still at the delta-ray, glanced once more into the visor, then turned like an automaton and pushed the switches and buttons which pointed the gracefully rounded nose of the *Entriss* toward Arth. Therol turned to the microphone at his elbow and issued final instructions to the crew.

The *Entriss* landed close to the cluster of temporary buildings which surrounded the new power house, now still and apparently deserted. Therol breathed a sigh of hopeful relief. Perhaps no one had been close by, after all.

Fifty feet from the *Entriss* lay the *Diana*, where she had settled back upon her landing gear when her generators, too, had succumbed to Therol's ray. As soon as the magnetic barrier had been broken, Therol had swept the entire continent of Noma with a powerful paralyzing ray, and every living thing in its path would be held in the grip of a coma which would last for exactly half an hour.

Long before this time had elapsed, Jaddo and his renegades had been taken from the *Diana* and carried to the building where Thal and his men were imprisoned. An exchange was made; Thal's crew was laid in orderly rows upon the soft turf and Jaddo's band was securely locked up in their place.

WHILE the loyal Uplanders were being carried out of the building, Therol had stood beside the line of stretchers and breathlessly inspected each one as it passed him. When would they bring Elta? Surely, she would be the next. But no. When the unconscious form on the last stretcher had been borne past, he almost cried aloud. Where could she be? Swiftly, he searched the building, then, half hopefully, went over the *Diana* again, only to have his hopes dashed to despair.

Dazed and sorrowful, he returned with Pladin to the prison building, where some of the men were showing signs of returning consciousness. Thal himself was the first to sit up and blink at the unaccustomed sunlight, and after a moment of amazed silence, he leaped to his feet and grasped Therol's shoulders, shaking them in a frenzy of pure joy.

"Ancient Gods! Is it really you Therol? And am I glad to see you! I had almost given up hope of your being able to break that devil's ray screen. How did—why Therol! What's the matter with you?"

"Thal," asked Therol, haltingly, "where is Elta?"

But when he saw sudden recollection blanch Thal's face, he knew what the answer was going to be:

"Good Lord, Therol! When your ray came through, Elta was in the power-house."

Gently, tenderly, Therol laid the cold, lifeless form on a couch in the tiny, white hospital room aboard the *Entriss*. Tears of anguish streamed down his face. In deference to their Councillor's great sorrow, Thal and his companions slipped quietly away.

Had Therol known that this was the price he must pay for Jaddo's subjection—he cursed the renegade with a depth of bitter hatred that surprised him, even in his grief. But why not? Jaddo's whole rotten soul was not worth the harming of one of Elta's little fingers.

He had found her huddled in a chair in one corner of the auxiliary transformer room—electrocuted by the enormous surge of static which accompanied the short-circuiting of the generators. With the fiendish cunning of the devil himself, Jaddo had placed her at his most vulnerable point of attack. There was not a mark nor a bruise on the perfect body. Death had come instantly and unheralded, and the beautiful features were serenely composed.

Distractedly, Therol's eyes wandered around the room and came to rest on the chronometer. Only an hour ago, he himself had loosed the ray which had—

He rubbed his eyes and stared at the clock as if hypnotized. Suddenly he sprang to his feet and tore open the chemical cupboard. Good Heavens! The shock of his grief must have unnerved him—dulled his usually quick wits. But there was still time, though the margin was only a matter of minutes!

Like a man reprieved, Therol flew about the little hospital, his every movement hurried but precise. First, he thrust his hands into a solution of liquid *cellurohn*, and when he withdrew them, they were coated with a thin, flexible and completely sterile film. Next, he fished a long, slender-needled syringe from the sterilizer and consumed precious seconds in weighing the colorless liquid with which he filled it. But this was important; essential . . . pure *adrephin* . . . injected straight into the heart . . .

HOURS later, Elta snuggled contentedly closer into Therol's arms and opened her eyes. Although she would soon be her lively, vivacious self again, she was very weak now; weak from shock and the action of the adrephin. While most of this powerful stimulant had been absorbed by the same ray-bath which had liquefied arterial coagulation, still, its effects would likely be felt for several days.

Lovingly, Therol carried his patient down the corridor to the navigator's stateroom and tucked her into bed. Softly, he kissed the lips so recently gray with death.

"There, my darling; now sleep and rest until tomorrow. God has been good and returned you to me, but for a long, long time, you must rest and avoid all excitement."

"Isn't it wonderful, Therol?" A peaceful smile lighted Elta's tired, wan face. "Locked in the transformer room, I had nothing to do but think of you. I remember that I had just closed my eyes and wished with all my heart that you would come to me . . . I opened them again and found myself in your arms . . ." Complete exhaustion came to claim her and in another moment long, dark lashes drooped lower and lower, until presently she was fast asleep.

But Therol, after calling Carmin to watch over his beloved, slumped slowly to the floor in a dead faint. The strain of the past few hours had been too much, even for his iron nerves and rugged strength.

Not many days later, Therol stood in the doorway to Jaddo's improvised prison. The renegade was disdainful; defiant to the point of insolence. Deep in his snapping, black eyes gleamed a queer mixture of fearless courage, cruelty and cunning. Cornered he might be, but one instinctively felt that nothing short of death would ever break his fixity of purpose. He knew that Therol had come to pass judgment upon himself and his crew. He also knew that although his case was without precedent in the history of his race, in the eyes of the Uplanders he had earned death. Yet, he stood proudly erect and impotent, smouldering hate was his only emotion.

Sadly, Therol surveyed the scowling crew of once peaceful, happy Uplanders grouped close behind their leader. To a man, they had elected to stick by their new star—the misguided zealot who had stirred in their breasts the dormant fires of lust, greed and discontent. Almost in spite of himself, Therol admired them for their loyalty. It was their only honorable course.

"Jaddo Fayne," the Councillor began, suddenly anxious to get the interview over with as quickly as possible. "You doubtless know why I am here. As you are well aware, our philosophy does not deal so much with the actions of an individual as with the causes underlying those actions. But perhaps you do *not* know that the contents of your mind are the property of no less than five people other than myself; altogether, six people have looked into your consciousness and watched the parade of your thoughts."

Jaddo paled and started ever so slightly at this, and for an instant the smouldering hate in his eyes threatened to burst into flame.

"Well, what of it? Do away with theatricals, Antrim, and tell us what you are going to do about it."

Steadily, easily, the level, gray gaze of the Councillor met and conquered the apostate's black leer.

"I have known the desire to rend you limb from limb, Jaddo, and I hold your life in my hands. But I shall not kill you. You shall live to make restitution. Besides, I have promised you to the frog people.

"Guard, bring the girl Chlo."

Her step steady, her mien haughty—almost regal—this last child of the Old Race stepped through the door, past Therol and without a word, stood beside Jaddo.

"Chlo Andreas," began Therol gently, "although it has been entirely within my power to have known the answers to the questions I am about to ask you, the sanctity of your thoughts has not been invaded. Therefore, would you please tell me why you were seen last night outside one of the windows of this room?"

"I was talking with the man I love." And the Arth girl cast Therol a scornful look as she took Jaddo's hand and continued:

"He has told me all—all his great plans and ambitions. They are beautiful; wonderful. Why couldn't you have stayed away from Arth?—in your own marvelous city. Jaddo and I would have founded a new race; a race capable of human feeling and warm emotion! Now you have spoiled everything. Everything. Oh, I hate you—you and your cold perfection!"

LIKE the splendid young animal she was, Chlo glared at Therol, who contemplatively shook his head and ruminated: "The inevitable call of kind to kind." Then aloud: "But surely, Chlo, you are not in sympathy with what your lover had planned to do to the frog people?"

"Those funny, green animals he intended bringing here to work for us? Why not? They would be happier here than on their own horrid little world."

"And," continued Therol, very, very softly, "did Jaddo tell you about Nisha?"

At this inquiry Jaddo snarled like a cornered beast and jumped in front of the girl.

"I'll answer that question, Antrim," he grated. "Certainly Chlo knows that Nisha was in love with me. Could I help that? I know what's on your mind, but if you are half as clever as you seem to think you are, you know I had nothing to do with Nisha's death."

"True, Jaddo. Nisha took her own life, but you know that you killed her just as surely as if your hand had held the knife. You know our women, Jaddo, and you must have foreseen the results. She thought you loved her. Because of her own love for you, she closed her eyes to right and honor, and you betrayed her; cast her out for another."

Under Therol's accusing stare, Jaddo's glance wavered and dropped. Then, covering his discomfiture with a sneer, he said:

"You surprise me, Councillor. You speak as if Nisha and I were mates. We had not even notified Eugenics."

"Let's argue no further, Jaddo Fayne. I had hoped to find a spark of reason left alive in your breast, but I see now that your reversion is complete; that you are entirely controlled by animal reflexes. Perhaps it is as well, for with you and your crew goes the last taint of savagery, and Arth will be the better because of it.

"You and your crew of men and women are to be forever banished from Arth and Vena. I have visited Eos. I have promised the frog people that you would return to them, and return you shall. The *Diana* shall take you there, where you shall be left with nothing save your wits and your hands. You are clever. You will soon make your peace with the frog people, and for your own convenience, lead them to a better mode of life. Therein, willingly or not, you will be making atonement of a kind.

"Have you anything further to say, Jaddo Fayne?"

Seething with impotent malevolence, but disdaining a reply, the renegade turned and gathered the now sobbing Chlo into his arms.

* * * *

A late, autumn sun cast mellow rays over beautiful, green-and-gold clad Noma. No longer was she still and dead. Man, her old master, had returned. But he had returned refreshed by his absence; stronger and nobler; a better and wiser ruler. Once more, a great, new city was springing up upon her breast, and in the years to come there would remain no sign of the tumbling ruins for which she had been weeping. Indeed, Noma and her mother, Arth, rejoiced.

Two lovers stopped for a moment beside a gigantic stone pillar. They were very much engrossed in each other. The man, after kissing the girl again and again, was heard to say:

"Is life not sweet, darling? We have each other, but not a care in the world. The *Diana* returned yesterday from Eos, and tomorrow the *Entriss* will bring her third cargo from Juno. Just think, Elta! We shall probably live to see this beautiful Arth made into the paradise we have planned!"

Vivacious, expressive eyes, glowing with the promise of still another paradise, were turned to the speaker and a curly head leaned against his shoulder as a soft voice replied:

"Yes, Therol. But in another year I must resign from the Council. Mates cannot serve together . . ."

Therol's arm stole around the slender waist.

True, one of them must soon resign. Perhaps they would both resign—and go adventuring together, somewhere out in limitless space!

THE END

Red Slag of Mars

(*Continued from Page 407*)

difficulty in reading it—these three, being laborers, were not very well educated, and the language of the monuments is no longer in common use.

"The three conducted me back into the cave, until we found a long, slender, cylindrical ship waiting at the mouth of a tunnel—but you must have seen those ships, like huge green arrows.

"In a few minutes we were in a city, deep in the planet. A strange place, and rather wonderful. Fantastic structures of metal, and of green crystal, like the ships, rising from gardens of blue and violet, beneath the globes that hang from the cavern roof.

"The scientists there were friendly enough, and I was soon communicating quite readily with them.

"I learned from them that there are some millions of the Martians surviving. They have a surprisingly great empire, beneath the surface of the planet. Thousands of caverns, connected with tunnels they have cut with some sort of disintegrating ray.

"It was a surprise to me to discover that the Martians had visited the earth. But the scientist assured me that several exploring parties had visited our planet, finding the atmosphere so heavy and the effects of the gravitation so oppressive that they had returned after the briefest of stays.

"Though the Martian scientists are a good deal ahead of us in most lines, I was able to give them a few bits of information that they appreciated.

"The scientists seemed to have a sympathetic interest in me—specially when they learned that war was still the rule on earth, as it once had been on Mars, and that I had devoted my life to trying to stop it. Several of the scientists offered, in fact, partly out of friendship and partly to show their appreciation for the *ionodyne*, to go to the earth with me to tell humanity something of the unfortunate military experiences of Mars.

"I REFUSED their offer, of course. I didn't think humanity would listen very kindly to the persuasions of such strange-looking beings.

"Then the Martian ship that had set out to pay a friendly visit to the *Princess of Peace* was shot down in the hills.

"The first reaction, among the Martians, naturally, was anger. I suppose you would have been wiped out if you hadn't taken off. But the civilization of the Martians soon asserted itself; their anger gave way to sympathy and regret.

"It was that occurrence that gave me the idea. You men who had been at each other's throats were fighting side by side in a few hours after the Martians appeared. It's a law of human nature that enemies will become allies when threatened with a peril greater than their danger to each other.

"This, it struck me, was the way to unite the earth!"

"You mean—" I broke out excitedly, "the attack on the earth—"

"Succeeded in its purpose," Dr. Eldred said, smiling, "when the Federation of Man was ratified.

"The scientists of Mars were willing to help. They fitted out the five ships. Used electronic repulsion for power, by the way. Faster than the *ionodyne*.

"First we wiped out the air fleets—a pity to kill all those men! But their bombs were smashing our civilization entirely too fast. Armaments, anyhow, have always been the greatest enemy of peace.

"Then I delivered the ultimatum—you know the rest.

"I went back with the Martians, of course. I have several friends among the scientists—really marvelous minds. They always accorded me the utmost courtesy and consideration.

"The last five years, I've spent on Mars. That's a long time, Sidney, to be away from all human beings. Much as I admire the Martians—the fact remains that they are a good bit different from men.

"I got lonely, Sidney, homesick. Got so I thought about the earth most of the time that I should have been sleeping. Blue, clear skies with birds singing in them. The cool wind on your face when you walk in the country. The roar of the city and the whisper of human voices. The washing of the sea, and its keen air.

"Then my tobacco was gone. And I was tired of the Martian food."

He ran his fingers through his long white hair, and smiled quickly at me—and something made tears come in my eyes.

"Anyhow, Sidney, I'm an old man. Old men ought to be where they can see people they love, and talk, and dream. An old man can't live off on a strange planet, even if its inhabitants are kind—

"I had the Martians bring me back. I knew, naturally, that I'd be *persona non grata*, if caught. But I thought I could hide somewhere and live out the rest of my years in peace, among human beings. Anyhow, I'd been away from earth long enough to take the risk. So I had them bring me back.

"That's the story, Sidney. And you understand why you can't repeat it."

My throat was tight, so I could hardly speak. I stammered, "But you can't—can't let them flash you out! You can't let them condemn you for a traitor, when you've done all that!"

"Think of the Federation, Sidney. Men believe there is a hostile power on Mars. An injustice, of course, to the Martians. But the belief holds them together. It gives them the sense of a common cause. It builds world-patriotism.

I nodded; my throat was aching. I could not speak.

"Enough of that!" he cried, and smiled almost gaily, and ran his fingers through his white hair. "Tell me about yourself, and Joan, and what you have done together."

I began talking to him, a little wildly and incoherently, I fear, of the happy, tranquil life that Joan and I had been leading.

All too soon, the bolts clicked, the rays vanished from across the door, and the warden entered to take me away.

Dr. Eldred rose, with a smile, to bid me farewell. My eyes dimmed so that his image swam before me; I had to grope for his outstretched hand.

"Good-bye, Sidney," he called after me, as I was hurried out. "And remember, not a word!"

In the bitter days that followed, during the trial and the brief preliminaries to the execution, I struggled hard with myself. My word was nothing, against the life of my friend. But I understood his reason for silence—and I kept my promise.

I saw Dr. Eldred during the trial, in the crowded courtroom in the Federation Tower. His white head was held high; he was always composed.

I glimpsed him a last time, as he was being conducted into the chamber of execution. Tranquil composure still supported him. His thin old body was staunchly upright; his weary face showed no bitterness.

He smiled, and walked proudly into the black room.

THE END

THE VANGUARD TO NEPTUNE

(*Continued from Page 353*)

THAT was true. I had sat up late, casting up my reckoning, hoping thereby to save time on the start in the morning. The corridors had been silent and deserted when I retired. Only the guiding lights were on. I had bidden my section guard "Good night" as I passed him. The rest was hazy.

I told Rifflin what my experience had been.

"That seems much what happened to the rest of us," he said. "The duty men seem to be blank about their part. They were on guard, then they ceased to exist until they came awake like we all did. Whatever struck them must have come up unawares."

"But," someone interjected, "how did the plant men get out of their quarters? The guard there would have been on the alert, watching for such a thing. They would have had to break down the door for a start. Anything they did would have made a noise. Yet none was made."

"It's a mystery of mysteries." That was Whitby, very subdued.

That thing which had been tugging at my mind seemed to tweak another string of my memory.

"I don't know . . . I may be wrong," I blurted out. "Perhaps I was only seeing things hazily, but when they had us lined up here not so long back, just before they gave us that last paralyzing spray I thought I must have been seeing double. There seemed a good many more plant men than we'd taken."

"We took twenty-five," Rifflin said. "Twenty-five, that's all that were left after we'd nursed their wounded back to life and buried their dead."

"There were," said Paula very slowly and distinctly, "exactly thirty-nine of them. I counted them . . . again and again. It was the sort of mechanical thing that one would do."

"Thirty-nine? Fourteen more than we'd accounted for," Rifflin exclaimed. "Are you sure of that, Miss Fontaine?"

"Positive," said Paula.

Rifflin looked blank. "Where could they have come from?" he said.

"There must have been more than that," I hazarded. "Some must have stayed behind to get the polyhedron and the *Icarus* into running trim. Good Lord . . ."

It is odd how a chance thing will start a train of memory, will set going a thought that with a leap of intuition spans the gap between the known and the unknown.

"Yes?" said Rifflin, looking at me intently.

"Just an idea," I answered. "Take it for what it's worth. But somehow it does seem to explain. That plant man that we found in the observation room . . . You remember him? He was in hiding. It was pure accident we unearthed him. If he hadn't smashed up those gravity shoes of his . . ."

"You mean," said Rifflin very steadily, "that he wasn't the only one in hiding. We found him, we didn't find the others, that's all?"

"Exactly." Somehow it was beginning to hang together now. "Perhaps they'd been left in charge originally, hadn't expected us to return as we did. Or they might have thought the men they captured were the entire crew. At any rate our return . . . the way we got the *Icarus* away from the influence of that cloud of theirs must have upset them. One we flushed . . . by accident. The others we did not. They lay low and waited. That would explain, too, why the polyhedron was not anxious to damage us. Didn't want to hurt their friends."

"And then," said Whitby, "the Gongkas upset their calculations, incidentally smashed up the polyhedron. We repaired it for them. Wasn't it kind of us? Meanwhile they lay doggo, found out, I've no doubt, as much about the workings of the *Icarus* as possible—there were ways they could have done that—and when we'd loaded up and made everything as nice for them as we could they struck. Put us all to sleep and released their friends. Then took their ship and our own, and left us here to moulder."

"Don't talk like that," said Rifflin sharply. "You should know better. We've got hands and brains and science, not to mention a friendly people to help us. It may take long, but . . ."

"You mean we may be able to build another ship?"

"I don't know. I'm willing to try if that's the only way out. But I don't think it is. I've another scheme to try first, but I'd like to think and talk over it a bit before I suggest putting it into practice."

"What is it?" A dozen of us asked the question together.

"Not now." Rifflin waved us back. "Other things to do before that. We'll have to take stock of our resources first."

I think the feeling in the minds of all of us was that he was talking thus merely to hearten us. There was a drawn look in his face, lines becoming visible under his eyes, a look in the eyes themselves that somehow did not seem consistent with what he was saying. He looked worried.

Naturally. We were many millions of miles from our home planet, and we had no means of getting back there, no means that I could think of by which our plight could be made known. Meanwhile the plant men, with what intent we could only surmise, were speeding off through our system. They might be heading for their own planet. Again they might not. We had no means of knowing.

But behind them now they had all the resources of their own world. With the *Icarus* in their hands they would almost certainly be able to make themselves acquainted with much concerning the science of the Inner Planets that it was not well that outsiders should know.

Perhaps I was unduly imaginative, but in that simple fact there seemed to me to lie the seeds of a trouble besides which our own particular plight might well sink into insignificance.

CHAPTER XXIV

The Break In The Clouds

AS Rifflin put it to us there were three courses open. We could set about constructing another ship. The resources of the Neptunian civilization were at our disposal; the discovery of *Neptunium*, as we decided provisionally to call the new metal, was also an asset; but we lacked the machines of fine precision, the manifold stereotyped calculations, and the standardized efficiency of the workshops of the Inner Planets.

To construct the ship we would have to begin by constructing the necessary tools and plant, start, as it were, from scratch. The work would be a long, slow, tedious business, and we might not be very successful in the end.

The second suggestion had possibilities and we looked at it for what it was worth. With the materials available we could readily enough construct a radio station,

Whether we could reach Earth or even Mars was a different matter. The difficulties were obvious. We had no doubt that Neptune, like the Inner Planets, possessed something akin to a Heaviside Layer of Earth's atmosphere, and in view of that we could only use ultra-short waves.

But there seemed some sort of a dead area in the neighborhood of Jupiter, for once we had passed that planet on our outward run our reception had ceased, and in the face of that we could not tell whether our own messages had got through to headquarters. Most probably they had not. On the other hand Jupiter was moving away along its path round the sun, and our relative positions were so constantly altering that the dead area may have passed well to one side. It was all a gamble.

The third suggestion seemed to offer the best prospects of reasonable success. We were too far away from the sun to use its beams for helio-glow signals as they do on the short runs between the Inner Planets, on the other hand we had in the artificial sun mirrors instruments with a concentrative power far above anything we could possibly have made ourselves. Whether, if we were able to divert a sufficient number from their original purpose of short-range work, they would be effective over the enormously long distance they would have to cover was something we would have to find out by experiment.

We could not even say with any degree of certainty that such helio signals would be noticed by any of the interplanetary stations. Even if they did notice them, they might not interpret them aright. The rhythm of a light message passing over such a distance was likely to be subject to interruption by the passage of all sorts of interstellar bodies in the intervening void.

In the end we decided after a long and solemn council at which all the officers were present that all three of the suggestions mooted should be adopted. We had plenty of labor and materials, and with three strings to our bow we were less likely to lose heart over the potential failure of any one of them. Also it would keep everybody occupied, and stop us from brooding over our lot, which, after all, was the main thing to be avoided.

Oddly enough the radio station was ready soonest. The adaptation of the mirrors presented difficulties in actual practice that we had not foreseen in theory. Using an ultra-short wave of under two meters we succeeded in penetrating the local radio layer. At any rate our tests showed that none of the waves of that length were reflected back. We did not get any replies over a period, however, and we could only conclude our messages had failed to reach their objective. Even if they had I myself could see little immediate hope of rescue. Most of the interstellar ships, even those of the Interplanetary Guards' service, were not large enough in capacity to carry the necessary fuel for so long a journey. True, it was now well over a year since the expedition had left Earth—our return was long overdue—and many things might have happened in the interval. Some of the ships that the Council was constructing might even now be finished, but whether they had been tested and put into commission was another matter altogether.

The work on the ship went on slowly. It entailed a great deal of paper work before we could get down to the actual constructional part, and unfortunately there was not one among us who had had actual workshop experience. We were all competent along our own particular lines, but our work began where the shore mechanics' left off. And as far as the scientists with us were concerned, they were in even a worse state. They were complete masters of the theory; they could do the draughtsmen's work, and make small scale models with an infinity of labor, but it was almost impossible to duplicate the trained precision and the years of experience that the shop-educated mechanics possessed. At times we felt on the verge of despair.

Yet somehow the new ship grew in bulk under our fingers. The shell was the least part of the trouble. That, made of *Neptinium*, presented comparatively little difficulty once we discovered that by working it over a wooden scaffolding plastered with a layer of clay mixed with oil the pitting which had worried us during the repair of the polyhedron was completely done away with.

It was the interior works that gave us most trouble, and I think we fell down badly over the machine-turned engines and machine-bored tubings. From beginning to end it was all experimental work, but it says a good deal for the sturdy doggedness of our fellows that in the end all difficulties seemed in a fair way to being overcome.

Meanwhile the radio station was still assaulting the ether, and the big mirrors for the helio transmitter had been put into use. But time went by, and no sign came that our messages had been received, so that it began to look as though our hopes must be pinned to the ship.

We proceeded with her only slowly. The most optimistic estimate was that it would be at least six months before she was in a condition to undergo her tests, and what the result of them might be no one cared to prophesy.

For one piece of good fortune we felt thankful. The Gongkas left us severely alone. Perhaps they had learned a lesson the night they had interfered between us and the polyhedron and, at tremendous cost to themselves, brought the latter to earth. No doubt they were creatures of a fair order of reasoning intelligence, and had become aware that we possessed weapons that made us particularly unpleasant antagonists. But if that was so their intelligence had not been equal to discovering that we were now unarmed and helpless, save for such weapons as we had procured from our Neptunian friends.

We lived, too, in an hourly unspoken dread that the plant men might return, and complete the work they had begun. However, that fear proved to be groundless.

Gark heard of our plight early on. He seemed to think little of it, however. Apparently he had a great belief in the capacity of Earthmen to rise superior to their misfortunes. At any rate he took advantage of our enforced stay to hold almost daily communications with us. Seemingly that aged brain was not too old to have lost a certain thirst for knowledge, particularly when it was the sort he could acquire from an alien intelligence.

Naturally it kept Paula busy, and since I was of no earthly use to the work gangs—my department was, as I have emphasized before, purely navigational—I was sent with her, partly as escort and partly as a source of information, for there were many things about our worlds she could not tell Gark unless someone was at her elbow to prompt her. I flatter myself I not only helped her to give Gark a liberal education in the lore of the Inner Planets, but from time to time acquired information that turned out later to be of the utmost value. For instance—but then, on reflection, that has nothing to do with this narrative.

One such day we had passed out of the domed city, and were returning to our base. The glare of the artificial suns after the soft blue light of the corridors beneath momentarily dazzled our eyes, so that we blinked and blinked again. Halvus Tar, who invariably accompanied us on such occasions, said something rapidly and excitedly in his native tongue.

"What's that?" I asked.

In common with the others I had acquired a good com-

mand of Neptunian by this, and was able to understand practically everything except obscure colloquialisms. But this last remark of his baffled me. Perhaps it was that in his excitement he had slipped into the vernacular.

For answer he seized my arm, and pointed.

I stared. The cloud ceiling overhead was breaking. The clouds seemed to be drifting apart, though we knew almost instantly it was not that.

Through the rift in the clouds, far, far above our heads, so high that it looked small and infinitely remote, a tiny silvery shape was descending slowly.

Too often had I seen such ships flashing across the void to be mistaken now. Another few minutes and its insignia was plain to view. A ship of the Interplanetary Guards, the watch-dogs of space, descending out of the grey Neptunian sky to our rescue.

WE owed our rescue to a lucky chance, yet the manner of it had been simple.

During the year we had been away many things had happened. The one that concerned us most was that the asteroidal colonies had been placed under a sort of condominium, with Earth and Mars jointly responsible to the confederation for the administration of affairs there. As a matter of necessity the Interplanetary Guards had extended the orbit of their patrols. Newer, larger ships had been built on Mars, and launched from there, and the widening patrols were made alternately by Martian and Tellurian vessels.

A new Guard ship, just recently commissioned, had arrived at Pallas only a short while before, and it was even then busy fitting out at the asteroidal base. It was communicated with, its loading completed as quickly as possible, and the ship itself rushed at velocity to that portion of space where our signals had first been recorded.

The patrols had not been inactive. They had had their instruments tuned up to record anything that came along; Jupiter was moving away on its path around the sun, taking the dead area due to its influence along with it, and no doubt because of this our signals were gaining in intensity.

The very patent fact remains, however, that as the new Guard ship, the *E. 99* hurtled across the void on her mission our signals abruptly became loud and clear.

It was a good reason why our departure from Neptune should be hurried. We delayed only to collect a few necessary specimens in place of those taken away in the *Icarus*. New Dewar bulbs were filled with *Neptinium;* additional moving pictures taken of interesting parts of the planet's life, and forty eight hours after the *E. 99* had broken through the clouds, she lifted again, and Neptune receded rapidly beneath us.

THE return of the expedition was not the secret its start had been. All the confederated planets were aware now of what had happened. The Board of Control, backed by a strong and enlightened public opinion, had consolidated its position, and Jens Fontaine was wise enough not to precipitate an open rupture when he had nothing now to gain and everything to lose.

As soon as we were within Earth's atmospheric envelope and our speed slowing to a crawl Paula asked for and obtained permission to make audiovisophone contact with her father. She spent an hour in the cabinet and came out with her face aglow.

"Wait and see," she said, when I asked her what had been the result.

I think, though, that there must have been threats and counterthreats made, wheedling and cajoling, too. Old Jens Fontaine was not the man to capitulate without a struggle. She must have used a devastating argument—or was it a threat?—finally to bring him to agree.

We came down at the Madison Landing stage in New York. Harran, the Earth member of the Council of Three, was there to meet us. There were relatives and friends of the crews.

A stocky figure stood a little to one side on the landing stage, a figure unmistakable. It lifted a ruddy face as we came down the gangway, started, stared and took a step forward. Jens Fontaine!

Jens Fontaine stared at her as though he could not quite believe his eyes. Then his arms went up, and he drew his daughter towards him and kissed her. I suppose I should have turned away, but I did not. I stood waiting for the blow to fall.

Paula released herself, and turned to me, beckoning me forward.

"Dad," she said with an odd catch in her voice, "this is Phil, Phil Grayne."

The keen eyes under the beetling eyebrows swept me from head to heel. I read antagonism in their depths, read too something that consorted ill with such a thing.

"Dam' you," said Jens Fontaine politely. "So you're the cause of the trouble, are you? I can't say I'm pleased to know you, but . . ."

"Dad." The one word from Paula was a shrill protest.

"Let me finish." The old man waved her aside. "But, I was going to say, it's the sort of thing I'll probably get over. It seems that if I'm to keep my daughter I'll have to put up with you. I'm making a fine start, aren't I?"

I chuckled. Met face to face there was something about this blunt, ruthless man one felt one could like. A directness . . .

"You may find me hard to get on with," he growled, "but I dare say in time you'll learn to do as Paula does and make allowances for me. But I can't have my only child doing as she said she'd do if I thwarted her, turning her back on Earth and me for good, and settling on Mars or Venus."

So that was what she'd threatened! She had assailed him on his one weak spot, his affection for her. She, the last of his race, had threatened to leave him childless in his old age, the things for which he had worked, the wealth and power he had accumulated, in view of that, turning barren and empty in his sight.

That was three years ago. Much has happened since, little of it of interest to any save ourselves. Nothing more has been heard of the plant men. They, with their polyhedron and the captured *Icarus*, have vanished into the infinite. Whether they come from some other system, light years distant from us, or merely from an unexplored satellite of one of the outer planets we cannot say. Until the whole of our solar system has been mapped and explored no definite statement can be made one way or the other.

And on that note this narrative of my personal experiences must close. The rest, the history of those further expeditions that opened up and developed the outer planets, is, or will be, written in the *Book of Warnings** for all intelligent planetarians to read and profit thereby.

*The Book of Warnings: The official history of the confederated planets' past and present, so called because a goodly proportion of the fifty volumes it comprises to date is devoted to warning the peoples of the Solar System against any return to the old evils we hope we have banished from our midst forever

THE END

The Voice in the Void

(*Continued from Page 393*)

For the past four years I have lived in dread, dread that someone would recognize me, that I would be unveiled as the murderer of the Martian priests in the Chicago hotel or as the man who had blasphemed the Martian religion and profaned the Temple of Saldebar.

I have kept to myself. I have gained the reputation of being shy, modest, retiring. I have not allowed myself to be photographed, I have granted no interviews. I have remained the Great Enigma and become the better known and gained more publicity because of it.

It was not that I cared for myself, for life is no longer valuable to me. It was fear that I would be discovered before the hour had struck, before I had completed all my plans. Now the hour is near and if I live a few more hours the world will never find me.

Only a few hours now. My plans are well laid, all arrangements are made. The broadcasting station is completed. Here in the cragged hills of North America's greatest mountains, there is a great vault, carved from the everlasting rock. Tonight Dr. John E. Barston, the world's greatest surgeon, will perform an important operation in that vault. When he leaves, he will take with him a chest half filled with jewels, all that is left of the great Martian treasure. He will take them with him as the price of silence. The men who built the vault are silenced, too, on the criminal colonies on Mercury. It took several handfuls of the jewels to do that.

At last revenge is in my grasp. In a few hours Mars will be the butt of the entire universe. In a few hours the Martian religion will be a joke.

The Martians, who excluded me from their planet, who stole my friend's radium deposits and then stole his body, the Martians, who made Kenneth Smith and me outcasts of the solar system, shall feel the point of our wrath. I am striking at them where it will hurt most. I am taking from them their proud religion, I am tumbling their card house down about the ears of their beastly priests. I am stealing their faith as they stole the body of Kenneth Smith.

Good old Ken! We were pals ten years ago and we are still pals. He has played a wonderful game. He has pretended that it didn't matter. It has been hard for him, as it has been hard for me. He has depended on me so much. It is I who have turned him on and off, who have shifted his cylinder so that he may rest his eyes on a different scene. With the passing of the years his senses and his brain have grown stronger. His reasoning power has increased until he thinks in almost pure logic. His one passion is revenge, revenge on the Martian race, and I am giving that to him.

I have here an electrical transcription of my own voice. In a short time, I shall turn on the power to its fullest in the great station and shall set before the microphone a machine to transcribe the metal cylinder that lies before me, to repeat the transcription over and over again so that all may hear, may hear my voice in a declaration that will seal the doom of the Martian religion. I shall lock the doors of the station and before they batter them down every living soul in the universe will know my story. Every person will know how the bones of Kell-Rabin were filched from the Temple of Saldebar, how the Martian race has worshipped almost six years before an empty box. They will know of the skeleton that I found in the pyramid in the Arantian desert and of the religious frenzy that has driven the Martians to destroy every one of these pyramids they can find.

They will know, too, the truth about Kell-Rabin, whose bones were worshipped for uncounted centuries as the Holy Relics and the Revered Remains. They will know that the bones of Kell-Rabin *are the bones of a Terrestrial, of a human being who must have lived on Earth millions of years before Mu rose out of the sea. They will know that a Terrestrial was worshipped as a god by the Martian race and that his bones were religiously placed in a box to be worshipped long after he had died . . . and from the fact that the bones in the old pyramid and the bones of Kell-Rabin were both Terrestrial skeletons they may draw their own conclusions.*

The Martians, what of them? When my words flash out to the mining stations of Mercury and the trading outposts of Pluto, where, then, will be the proud religion of Mars? Crumpled, dissolved, gone! Gone, as is Ken Smith's radium deposits and his body. My words will rob them of the thing they have held dear, all their teachings will be for nothing, all their creeds will be empty words whistling in the wind.

A Martian has worshipped a Terrestrial! The Martian race, believing they have worshipped a god too great to give attention to the lesser races, will know that they have worshipped, not a god at all, but a man from Earth, one of the despised, money-grabbing, business-like men of the third planet.

When that is done I shall hurry to keep my last earthly appointment. The appointment will be with Dr. Barston in the vault that is chiselled from the living stone. Weeks ago I placed in his hands complete directions, given me by Tarsus-Egbo, for the process of transferring a human brain to one of the cylinders. One of the cylinders, especially constructed under directions and specifications also given me by the Martian, now rests in the vault.

There, in the vault, I shall lie down on an operating table and Dr. Barston will take my brain from its cavity and place it in the cylinder and when he leaves, with a jewel chest under his arm, there will be three cylinders, all standing in a row . . . waiting for what?

He will close the door of stone behind him and the automatic bolts will shoot home. The three of us, Kenneth Smith, Tarsus-Egbo, and myself, will remain behind, awaiting our fate.

Perhaps, in millions of years, men wonderfully advanced in science, will find us and mayhaps they will know how to release us from the cylinders and give us bodies again. Perhaps men will never come and we will remain forever in the deep sleep of seeming death. Perhaps we will never be aroused from that sleep, perhaps no one will ever attach the machine to our cylinders. If anyone of intelligence gains entrance to our vault, he will find there, imprinted on metal pages, definite information which should be easy for him to follow.

Life holds no more for me. I might as well be dead. It is Ken's idea, however, and I am going through with it. It was my suggestion that I destroy his cylinder and kill myself when vengeance was accomplished, but he suggested this other way, and it may be the better way.

Only a few minutes remain. I must soon start for the broadcasting station. Then I must hurry to keep my appointment with Dr. Barston.

My last thought shall be, I know, whether or not I will ever live again, or if, when I go under the anaesthetic, my days are ended. It matters little either way. My vengeance will then have been complete.

When the knife cuts into my skull, all the universe will be listening to my final words, and the name of Kell-Rabin will be bandied about in laughter from world to world.

SENSATIONAL DISAPPEARANCE. FIRE IN NEW INTERPLANETARIAN RADIO STUDIO VEILS DEEP MYSTERY

By Amalgamated Press

VENTNOR, Calif., October 5th—As the new gigantic interplanetarian station IXXB went on the air tonight for the first time, the whole universe held its breath for what its new and generous owner, Mr. Robert Humphrey would have to say. Much mystery had surrounded the building of this station and untold wealth had been poured into it, yet no one seems to have the confidence of the silent Humphrey who intimated that the mystery would be speedily ended with the first broadcast.

Mr. Humphrey had spent much time in arranging his inauguration address, and instead of facing the microphone himself, he had preferred to make a record of his voice and it is understood that a number of these had been made as he was not satisfied with the first ones. He intended to have the first broadcast letter-perfect, and it was personally "edited" by him a number of times to make it 100% perfect.

The station, as is well known, was to go on the air last night at 8 o'clock sharp, and the populace of not only our own earth but all the other planets were at a fever pitch to hear this first broadcast. The reason of course, was that Mr. Humphrey had spent millions in the week before the broadcast was to come off in newspapers, radio broadcasting on other stations, and, as a matter of fact, he used every means of publicity he could to draw attention to the first broadcast of his station. Sensational copy was used in all his advertising to make sure that everybody would listen. Such sentences as "The Greatest Dramatic Story Ever Told in the Universe," "Revelations That Will Set the Universe Agog," had caused heated speculation as to what the first broadcast would be.

A few minutes before 8 o'clock, when the memorable event was to come off, a heavy thunderstorm was at its height near this city, and at exactly five seconds before 8, a lightning bolt struck the studio of the immense station. The listeners heard the announcer introduce Mr. Humphrey whose voice from the record had just gone on the air, with the words, "Ladies and Gentlemen, I am about to make the most dramatic revelation of the ages . . ." This terminated the broadcast because when the lightning struck it set fire to the studio, and inasmuch as the announcer and the two control men at the studio had been stunned, the fire immediately gained some headway and the record was destroyed in the ensuing blaze.

There was no duplicate record, but strangest of all, Bob Humphrey was not in the building, and he is strangely missing. The mystery has now deepened, as for sixteen hours no word has been had from Humphrey. It is certain that if he had been near the scene, he would have been able, in person, to make his announced broadcast or supply another record. The fire was not so extensive, and the main radio generating plant was not damaged excepting the studio, and the station could have gone on the air within three hours after the fire. Yet, there is no word from Humphrey. His station staff hint that he bid them goodbye in the afternoon telling them that "they might have to get new positions after tomorrow." Foul play is feared.

THE END

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THE READER SPEAKS

In WONDER STORIES QUARTERLY only letters that refer to stories published in the QUARTERLY will be printed.

Six Cases Ably Expounded

Editor, Wonder Stories Quarterly:

A little discussion of Mr. Cypin's discovery of a "fallacy" in my plot which Mr. Cummings turned into the "Derelict of Space."

First assumption: That little part of earth's surface which we call Texas is motionless in absolute space.

Case 1: A crack train, the Sunbeam, leaves Houston for Dallas at one minute after noon, arriving at 6:30 p.m. I am a passenger, sitting in a reclining chair car on the right (east) side of the train. My suitcase beneath me keeps its position relative to me. The smoke from my cigarette goes straight up. The window by my right hand remains next to me. We all travel together. It is now 12:15½ p.m. In six hours we'll be coming into the edge of Dallas. Scenery seems to flow backward outside the window.

Case 2: At 12:15½, instead of sitting inside the car, I am crouched upon the roof of the same car. The wind sweeps my hat off; but the car, including its roof, move along with me. An airplane, flying low, passes the train from behind. By an improvement of the still dangerous method by which army planes can pick up ground messages, the airplane swings a grapnel to hook into a harness upon my back, and swings me aloft. In two hours, at 2:15½ p.m. the plane drops me at the very place where the train will be at 6 14'; . I have traversed the same space in faster time, and am four hours ahead of the train.

Case 3: At 12 15½ I am sitting inside the train, as in Case 1. Mr. Cypin sits beside me. Instead of climbing on top of the train for the airplane pick-up, dangerous to me, to my hat, and especially to the aviator, I use a time travel machine. It is connected with a system of wires in my clothing and my hat, and to my spectacles. Everything between the wires or within six inches of them will move. At 12:15½ precisely I press the switch which will advance me six hours in time. Immediately:—

A—Mr. Cypin feels a draft, for my right shoulder was within six inches of the window glass. He turns his head, and is amazed that I am no longer there: most of the seat is gone, too, and part of the floor. Six hours later, when Mr. Cypin and the train are entering Dallas, I am not back on the train with the window glass, seat, and flooring, because, when I pressed that switch at 12:15½, immediately:—

B—I, part of the seat, part of the floor, part of the window, and some air, are at 6:15½ p.m. in time but occupying the same space in Texas that we occupied six hours earlier. I mention three possibilities:

Best possibility: The southbound Owl, which left Dallas at 12:01 p.m. for Houston and passed the other train and Mr. Cypin halfway, is entering Houston. I and my impediments land on the carpeted floor of the observation diner, and after a slight jolt are ready to ride into Houston station. Mr. Cy-

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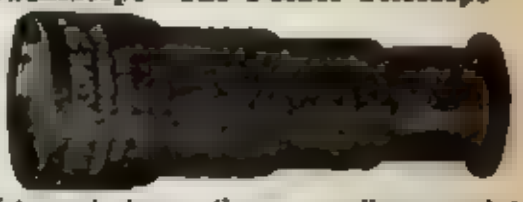

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THE READER SPEAKS

(*Continued from Page 429*)

pin and I are some two hundred miles apart.

Greatest probability: In arriving at 6:15½ p.m., we find the track unoccupied, and fall with a bump, landing on the rail. I walk to the nearest street car and go home for supper.

Worst possibility: The southbound train is a second or two late. At 6:15½ p.m. its oil burning engine occupies the space from which I began my time journey. I land in the firebox and go up in smoke. Just my luck!

Now we are ready to leave Texas. Instead of the first assumption, take a *second assumption*: The center of the earth remains at the same point of absolute space. For convenience, we let the axis of the earth remain along the same line. The earth rotates on this axis.

Case 4: Mr. Cypin and I enter a launch at Coney Island and proceed five miles south, to latitude 40°, longitude 74°, exactly. With our time travel apparatus, we, at noon precisely, transport ourselves six hours in time to six p.m. But during that time the globe will have made a quarter-revolution. Our latitude is the same, but we are 90° of longitude further east, at sea level under a mountain ESE of Lauria, Potenza, Basilicata, Italy. That unfortunate journey was in time, not in space. Since there is six hours difference in sun time between Coney Island and Lauria, Mr. Cypin and I die at midnight precisely, Lauria time, and six p.m. E.S.T.

Case 5: We start from a balloon over the water, not from a boat on the surface. We travel instantaneously, not through time this time, but eastward 90°. Immediately we arrive on the same Italian mountain, and it is six p.m. there.

Change now to a *third assumption*: The sun is at absolute rest; the earth revolves and rotates normally.

Case 6: At noon, sun time, from any point on the globe, we transport ourselves, not in space but in time, six hours forward or backward. Result: we occupy the same position relative to the sun, but the earth is six hours away, some considerable mileage. There we are in space.

The plot which Mr. Cummings made into a story omitted even that assumption. It assumed instead that the sun also moves in space. The weakness is the lack of any fixed point of reference. The theory of relativity seems to deny us that. If I understand Eddington's popular exposition of Einstein, the speed of light is a controlling limit, and in the space-time continuum there are certain events that can and some that cannot be related to our here-now. Time travel, in fiction, is an entirely different thing.

Time travel is not just my going back to where I was yesterday (that would be memory, and I'd remember your presence there then, too) nor ahead to where I'll be tomorrow. By the ordinary conventions of science fiction, time travel is either moving to a different time and place, as if you go from the U. S., A. D. 1931, to the Great Wall of China, A.D. 931, or else it is moving to a different time in the same place, which is the commoner fictional use. The point of my lucky plot was that time

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THE READER SPEAKS

travel which failed to consider the movement of the earth in space would be disastrous. In my office at home are some notes for a story I hope to write on a variation of the same point.

Appreciative regards to Mr. Cypin; also to Dr. Foltz. Now I'll stop writing and read the stories in the new WONDER STORIES QUARTERLY. They look good.

W. Thurmond,
Victoria, Texas.

(Mr. Thurmond has so ably expounded his thesis of the fascinating story, "Derelict of Space" that we add no comment. But if Mr. Cypin is not convinced we invite him to reply.—*Editor*)

The Earth Would Move Closer

The latest issue of the QUARTERLY was the best since its inception. Mr. Pratt certainly outdid himself. "The Onslaught from Rigel" was exceedingly pleasing inasmuch as Mr. Pratt mixed the right proportion of good humor with the dramatic side of the story.

"The Moon Destroyers" was good although the author forgot that, as the editor says, the earth and the moon are an astronomical unit. Hence the removal of the moon would cause a decrease in the centrifugal force of the earth-moon system around the sun, and would result in the earth's moving closer to the sun by about five or six million miles. Whether this would be harmful or not cannot be readily determined.

"The Revolt of the Star Men" presents a bizarre thought. The possibility of life existing in interplanetary space is not as remote as it may seem to be. There are several kinds of protozoa and bacteria which are able to survive even at such low temperatures as the boiling point of helium which is 269 degrees below zero Centigrade, only four degrees above absolute zero.

Neil R. Jones' story was novel, to say the least. The end was quite unexpected, almost like one of O. Henry's.

Both of the contest stories were good. The fourth prize story deserved a higher award however for the third prize tale was too much like P. Schuyler Miller's "Man From Mars."

And as usual, Paul's art was above reproach. Yes, Mr. Editor, you'll have to go a long way to beat the Winter 1932 QUARTERLY.

Milton Kaletsky,
New York, N. Y.

(Mr. Kaletsky is in error in his belief that the moon exercises any influence on the earth's rotational period or distance about the sun. The earth's orbit is determined by two factors: its speed about the sun and its distance from the sun. Were either one changed the other would have to be changed in an inverse proportion. An increased distance from the sun would mean a slower orbital speed, for stability; and the contrary would be true if the earth approached the sun.

The moon's effect upon the earth is purely in the earth's rotation on its axis. There would probably be huge tidal waves following the moon's demise; but no effect on its orbital motion.—*Editor*)

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What liberties to allow a lover
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Charles Atlas, As He Is Today. (Photo taken July 15, 1931.)

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